

ALL HANDS

JANUARY 1994

I am a United States sailor.

I will support and defend the Constitution of the United States of America.

I represent the fighting spirit of Navy Blue-jackets who have gone before me to defend freedom and democracy around the world.

I proudly serve my country's Navy combat team with honor, commitment and courage.

I am committed to excellence and the fair treatment of all.

I will obey the orders of my superiors.

Owner's and
Operator's Manual

ALL HANDS

January 1994

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On the Covers

Front: Photo courtesy of AT&T Military Marketing Team.
Back: Warfare pins. Photo by PHC(AW) Joseph Dorey.

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All Hands (USPS 372-970; ISSN 0002-5577) (Number 921) is published monthly by Naval Media Center, Publishing Division, Naval Station Anacostia, Bldg. 168, 2701 S. Capitol St. S.W., Washington, D.C. 20374-5077. Second-class postage paid at Washington, D.C. 20374, and additional mailing offices.

Subscriptions: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price: \$20, U.S. and FPO; \$25 foreign; \$3.50 single copy domestic; and \$4.88 foreign copy. Make check/money order payable to "Superintendent of Documents, GPO."

Postmaster: Send address changes to *All Hands* magazine, Naval Media Center, Publishing Division, Naval Station Anacostia, Bldg. 168, 2701 S. Capitol St. S.W., Washington, D.C. 20374-5077.

Editorial Offices: Send submissions and correspondence to: Naval Media Center, Publishing Division, ATTN: Editor, Naval Station Anacostia, Bldg. 168, 2701 S. Capitol St. S.W., Washington, D.C. 20374-5077. Phone (202) 433-4171 or DSN 288-4171. Fax (202) 433-4747 or DSN 288-4747.

Message: NAVMEDIACEN WASHINGTON DC //32//

Authorization: The Secretary of the Navy has determined this publication is necessary in the transaction of business required by law of the Department of the Navy. Funds for printing this publication have been approved by the Navy Publications and Printing Committee. ClipArt Images from CorelDraw 3.0 were used in the preparation of this magazine.

Your guide to the *All Hands* "Owner's and Operator's Manual" U.S. Navy

Many changes have occurred since you first entered the military and went through "Navy 101." Bases are being closed; new, streamlined, high-tech ships are entering the fleet every day; and we are reorganizing the way we do business.



With this in mind, the staff at *All Hands* decided it was time for an "Owner's and Operator's Manual" for the U.S. Navy. But don't let the title worry you; this guide is user friendly.



As you flip through the magazine, you'll find out where we steam, with whom and why. You'll also get a glimpse of what the future holds — presented in a straight-forward manner.

After reading it, show it to your friends and family. Let your children take it to school for show and tell. Consider this issue of *All Hands* the first of what is to become an annual update for the owners and operators of the U.S. Navy.



*"I want to say a word about the Navy,
and to tell you about what it means to me
to have a ready fleet. When word of a crisis
breaks out in Washington, it's no accident
that the first question that comes to every-
one's lips is: Where is the nearest carrier?"*

— President Bill Clinton
March 12, 1993



... From The Sea



The Constitution of the United States directs Congress to "provide and maintain a Navy." Congress, in turn, tells the Navy to "be organized, trained and equipped primarily for prompt and sustained combat incident to operations at sea."

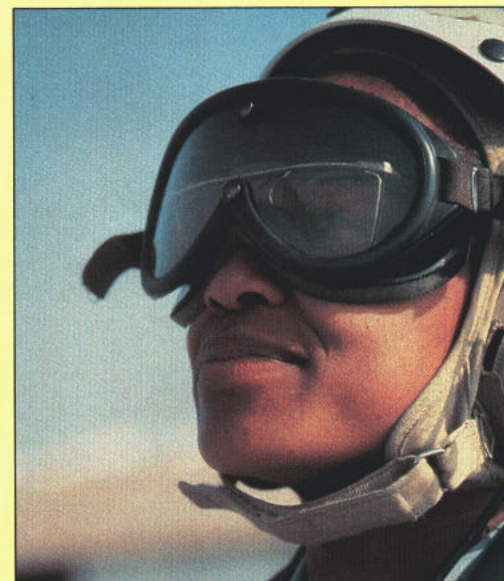
Today, as in the 18th century, the U.S. Navy's mission has been directly linked to the economic and political well-being of our nation and the security of our way of life. As a maritime nation, the United States uses the oceans as barriers for defense, as avenues of commerce and access to our overseas allies, and as a springboard for forward presence.

Where are we going?

The world's political and military situation has changed dramatically in the past few years, and our concept of naval operations has reflected the change. U.S. naval strategy has shifted from a focus on a single, global, superpower threat to a focus on multiple, regional challenges and opportunities, concentrating on the coastal areas of the planet. More than 90 percent of the planet's landmass can be reached by naval forces operating from the sea.

While the prospect of global war has diminished, we are in a period of uncertainty in regions critical to our national





interests. In this new and ambiguous international context, however, U.S. naval forces shape the environment in ways favorable to our interests by underpinning our alliances, precluding threats, and helping to preserve the strategic position won with the end of the Cold War.

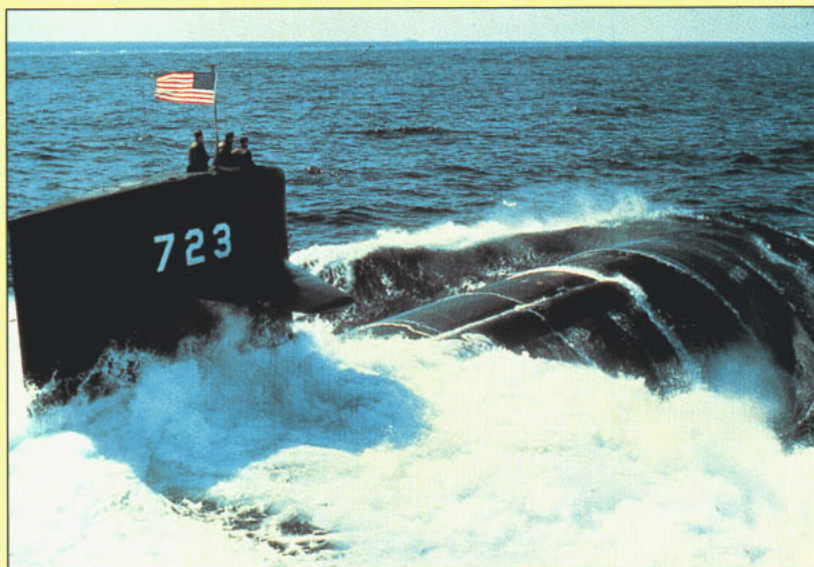
How we are getting there

A reassessment of the role of naval forces in the post-Cold War world has led U.S. naval forces to concentrate on the following capabilities:

Naval Expeditionary Forces. The combined Navy and Marine Corps team, active and reserve, when constituted as a Naval Expeditionary Force, is able to swiftly respond on short notice to crises in distant lands. The forces are structured to build power from the sea, whether for humanitarian relief or offensive operations. Because ships are by their very nature self sufficient, naval forces can remain on station for extended periods. Freedom of the seas guarantees legal access up to the territorial waters of all coastal countries of the world, so naval forces are unencumbered by the need for transit or over-flight approval from foreign governments in order to enter the scene of action.

Shaped for Joint Operations. The Navy and Marine Corps are full partners with the Army and Air Force. The battlefields of the future will demand that everyone on the field be teammates. Naval forces serve as an enabling force in most joint and combined (with other countries) operations. When necessary, naval forces "kick the door down" on the beach and establish a presence upon which other forces can build.

Operating Forward ...from the Sea. As the





United States continues to withdraw from overseas bases, naval forces will become even more relevant in meeting American forward presence requirements. Operating forward, naval forces are prepared to fight promptly and effectively, but they also serve in an equally valuable way by engaging as day-to-day peacekeepers in defense of United States interests. Naval forces also contain crises through forward operations and rapid response with flexible and sustainable sea-based forces. The seeds of conflict will continue to sprout in places where U.S. interests are perceived as vulnerable. The art of managing crises in these areas is delicate and requires the ability to orchestrate the appropriate response and to send precisely tailored diplomatic, economic and military signals to influence the actions of adversaries.

Tailored for National Needs. As naval forces shift from a Cold War, open ocean, blue water naval strategy to a regional, littoral (coastal) and expeditionary focus, naval organizations will change. Responding to crises in the future will require great flexibility and new ways to employ our forces.

The future is now

The Navy of today is different from the Navy of a few years ago and will continue changing through the end of this decade. Sometime around the end of this decade, active Navy forces will stand at around 390,000 people, with about 330 ships. Compare this to 1945, when the Navy had more than 3 million men and women in uni-

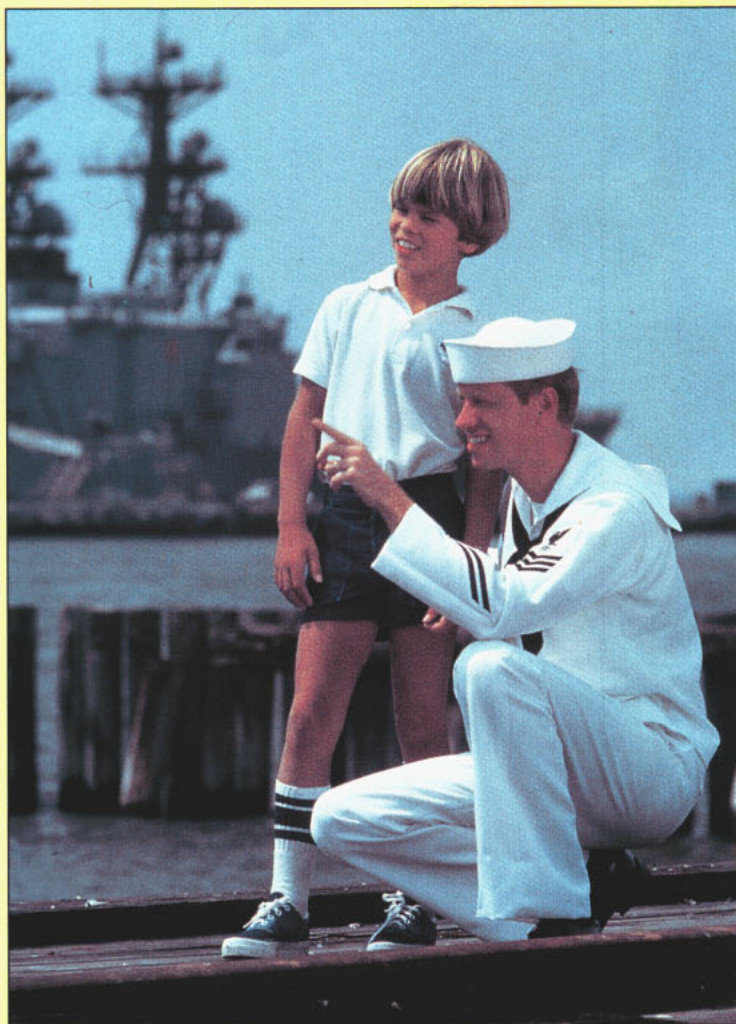


form and more than 6,000 ships. At the end of World War II, following our victory, the Navy shed ships and personnel at a furious rate.

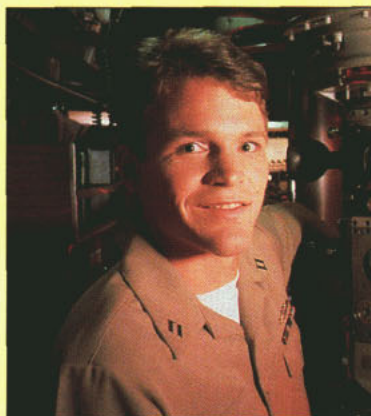
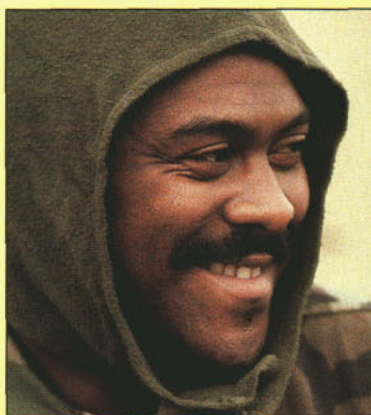
Today, we are decommissioning ships, closing bases, and downsizing the number of personnel, but not just to be a smaller version of ourselves as we were during the Cold War. The Navy is getting smaller, but we are doing it in such a way as to not compromise our ability to meet commitments, or the quality of our people.

It's the people, the sons and daughters of the United States who serve as crew on board the ships, submarines, and aircraft, who have met today's challenges and are mastering tomorrow's.

Today, the Navy is engaged in numerous operations around the world, supporting military and humanitarian missions. Although there has been a significant change in the threat our country faced just a few years ago, we are well on the way to identifying the right mix of programs to provide our nation with the military capabilities it needs in a still-threatening world. Our naval contribution to the security of the United States will have a regional and littoral focus and will continue to be responsive and flexible, able to be positioned rapidly throughout the world as the President may require, so we can answer his question, "Where is the nearest carrier?" ⚓



Rudder Orders



As a matter of policy, the following guiding principles comprise the foundation upon which the entire Navy operates:

- ☼ People are the Navy's most valuable asset.

- ☼ The Navy must attract quality individuals.

- ☼ We encourage our people to make the Navy a career.

- ☼ We provide frequent recognition to deserving individuals and units.

- ☼ Our goal is to promote people to the highest grade or rank according to their abilities.

- ☼ We make duty assignments based on both the needs of the Navy and the individual.

- ☼ Some personal hardships may require reassignment or discharge from naval service.

- ☼ Training and education are vitally important.

- ☼ We value and depend on professional input and ideas from all our people.

- ☼ We do not tolerate discrimination, any form of sexual harassment, inappropriate fraternization, or the illegal or improper use of drugs or alcohol.

- ☼ We provide timely, constructive written evaluations of performance.

- ☼ We provide leave for every member, liberty time away from work, all benefits allowed by law and seek to keep pace with changing economic conditions.

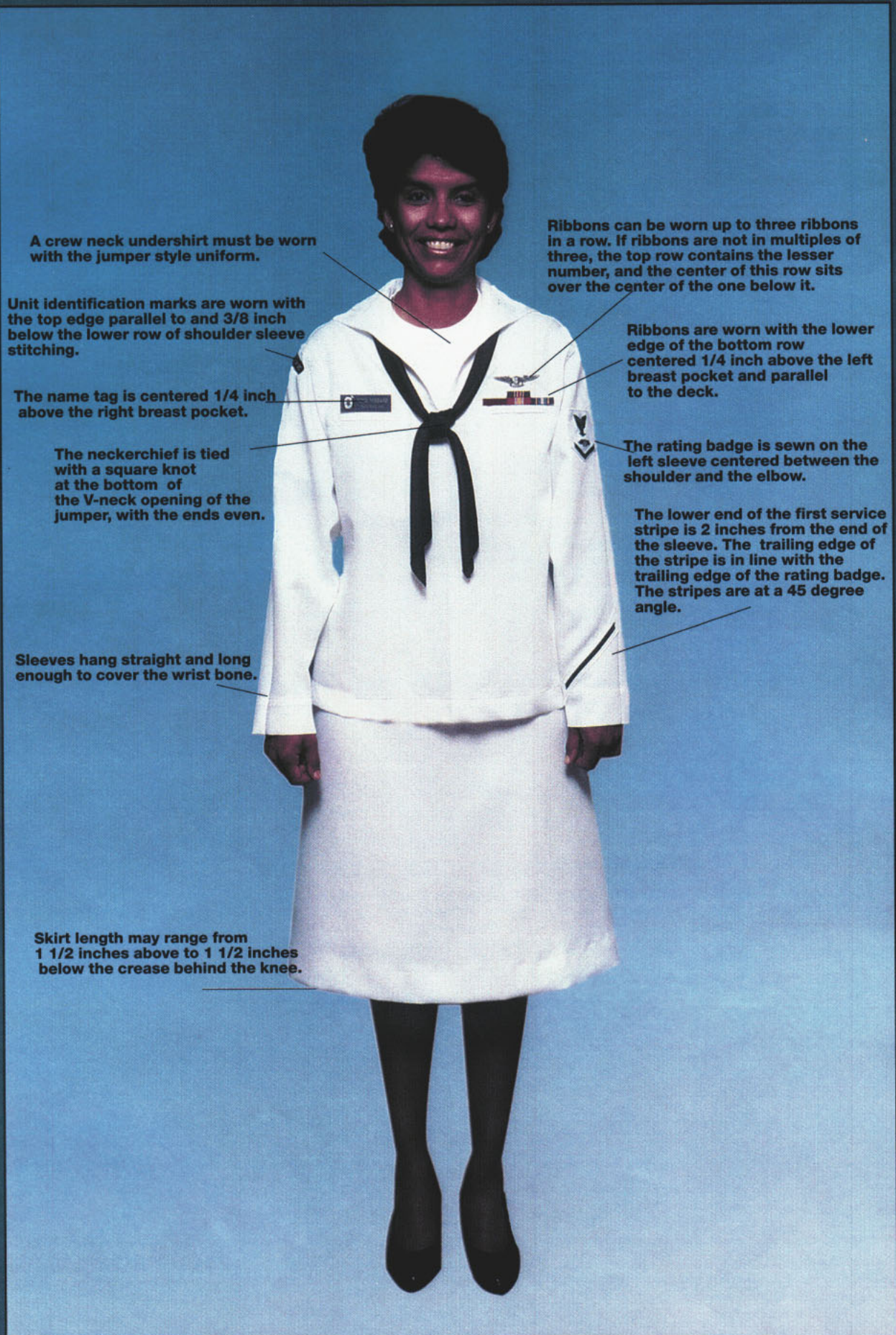
- ☼ We strive to provide high-quality, attractive, modern facilities for our people.

- ☼ We are committed to the safety of our people.

- ☼ We are accountable to standards of conduct, federal statutes and regulations.

- ☼ We look after the individual needs of our people.

Enlisted Women's Service Dress White Uniform



A crew neck undershirt must be worn with the jumper style uniform.

Unit identification marks are worn with the top edge parallel to and $\frac{3}{8}$ inch below the lower row of shoulder sleeve stitching.

The name tag is centered $\frac{1}{4}$ inch above the right breast pocket.

The neckerchief is tied with a square knot at the bottom of the V-neck opening of the jumper, with the ends even.

Sleeves hang straight and long enough to cover the wrist bone.

Skirt length may range from $1\frac{1}{2}$ inches above to $1\frac{1}{2}$ inches below the crease behind the knee.

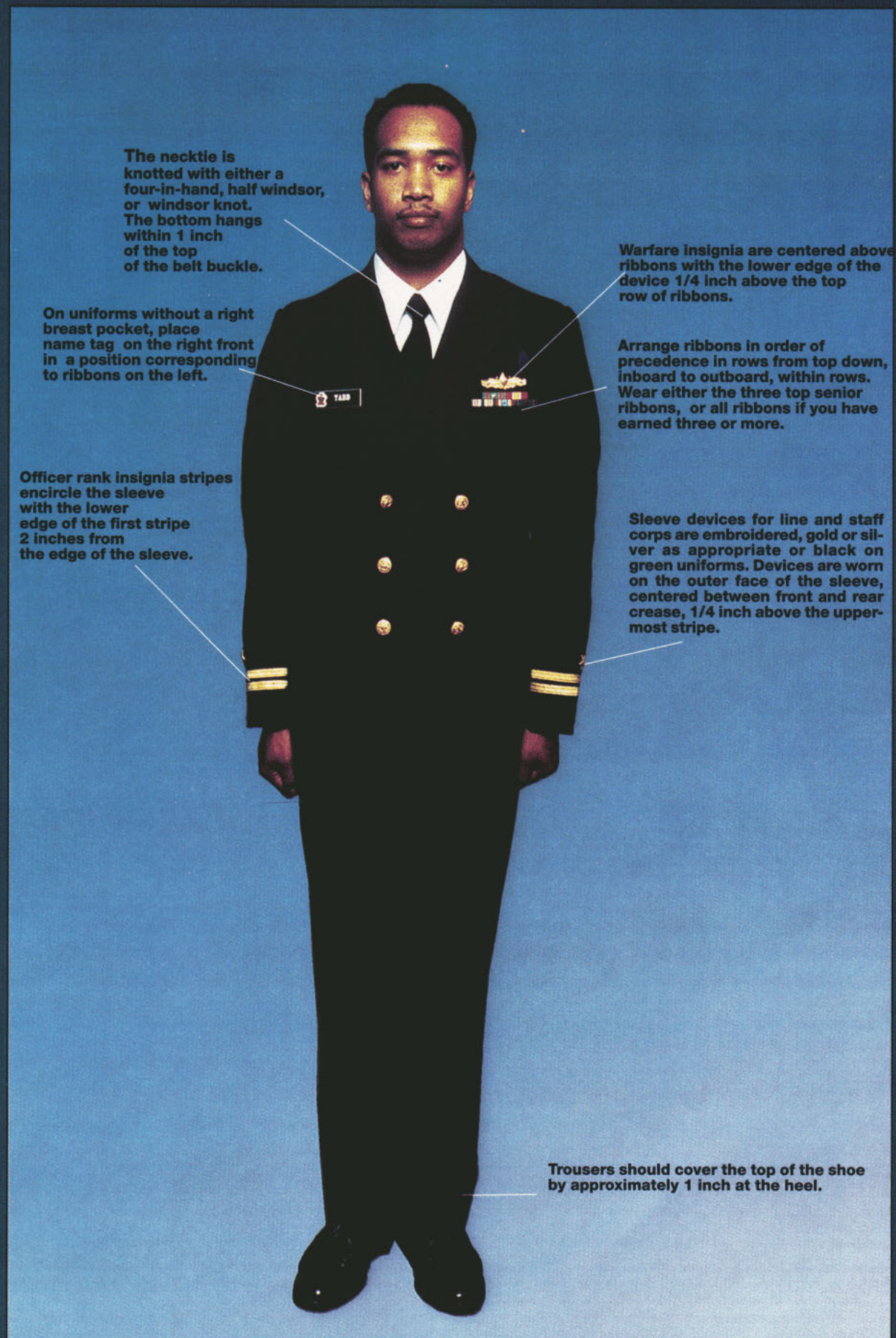
Ribbons can be worn up to three ribbons in a row. If ribbons are not in multiples of three, the top row contains the lesser number, and the center of this row sits over the center of the one below it.

Ribbons are worn with the lower edge of the bottom row centered $\frac{1}{4}$ inch above the left breast pocket and parallel to the deck.

The rating badge is sewn on the left sleeve centered between the shoulder and the elbow.

The lower end of the first service stripe is 2 inches from the end of the sleeve. The trailing edge of the stripe is in line with the trailing edge of the rating badge. The stripes are at a 45 degree angle.

Officer Men's Service Dress Blue Uniform



The necktie is knotted with either a four-in-hand, half windsor, or windsor knot. The bottom hangs within 1 inch of the top of the belt buckle.

On uniforms without a right breast pocket, place name tag on the right front in a position corresponding to ribbons on the left.

Officer rank insignia stripes encircle the sleeve with the lower edge of the first stripe 2 inches from the edge of the sleeve.

Warfare insignia are centered above ribbons with the lower edge of the device 1/4 inch above the top row of ribbons.

Arrange ribbons in order of precedence in rows from top down, inboard to outboard, within rows. Wear either the three top senior ribbons, or all ribbons if you have earned three or more.

Sleeve devices for line and staff corps are embroidered, gold or silver as appropriate or black on green uniforms. Devices are worn on the outer face of the sleeve, centered between front and rear crease, 1/4 inch above the uppermost stripe.

Trousers should cover the top of the shoe by approximately 1 inch at the heel.

ORDER OF PRECEDENCE — U.S. NAVY



MEDAL OF HONOR



NAVY CROSS



**DEFENSE
DISTINGUISHED
SERVICE MEDAL**



**DISTINGUISHED
SERVICE MEDAL**



SILVER STAR



**DEFENSE SUPERIOR
SERVICE MEDAL**



LEGION OF MERIT



**DISTINGUISHED FLYING
CROSS**



**NAVY AND MARINE
CORPS MEDAL**



BRONZE STAR



PURPLE HEART



**DEFENSE MERITORIOUS
SERVICE MEDAL**



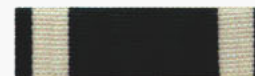
**MERITORIOUS SERVICE
MEDAL**



AIR MEDAL



**JOINT SERVICE
COMMENDATION
MEDAL**



**NAVY COMMENDATION
MEDAL**



**JOINT SERVICE
ACHIEVEMENT MEDAL**



**NAVY ACHIEVEMENT
MEDAL**



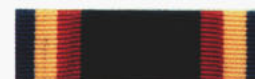
**COMBAT ACTION
RIBBON**



**PRESIDENTIAL UNIT
CITATION**



**JOINT MERITORIOUS
UNIT AWARD**



**NAVY UNIT
COMMENDATION**



**MERITORIOUS UNIT
COMMENDATION**



NAVY "E" RIBBON



POW MEDAL



**GOOD CONDUCT
MEDAL**



**NAVAL RESERVE
MERITORIOUS SERVICE
MEDAL**



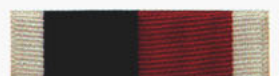
**FLEET MARINE FORCE
RIBBON**



**NAVY EXPEDITIONARY
MEDAL**



CHINA SERVICE MEDAL



**NAVY OCCUPATION
SERVICE MEDAL**



**NATIONAL DEFENSE
SERVICE MEDAL**



KOREAN SERVICE MEDAL



**ANTARCTICA SERVICE
MEDAL**



**ARMED FORCES
EXPEDITIONARY MEDAL**



**VIETNAM SERVICE
MEDAL**



**SOUTHWEST ASIA
SERVICE MEDAL**



**HUMANITARIAN
SERVICE MEDAL**



**SEA SERVICE
DEPLOYMENT RIBBON**



**NAVY ARCTIC SERVICE
RIBBON**



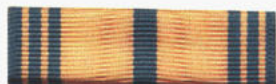
**NAVAL RESERVE SEA
SERVICE RIBBON**



**NAVY AND MARINE
CORPS OVERSEAS
SERVICE RIBBON**



**NAVY RECRUITING SERVICE
RIBBON**



**ARMED FORCES RESERVE
MEDAL**



NAVAL RESERVE MEDAL



**PHILIPPINE
PRESIDENTIAL UNIT
CITATION**



**REPUBLIC OF KOREA
PRESIDENTIAL UNIT
CITATION**



**REPUBLIC OF VIETNAM
PRESIDENTIAL UNIT
CITATION**



**REPUBLIC OF VIETNAM
GALLANTRY CROSS
UNIT CITATION**



**REPUBLIC OF VIETNAM
CIVIL ACTIONS UNIT
CITATION**



**UNITED NATIONS
SERVICE MEDAL**



**UNITED NATIONS
MEDAL**



**MULTINATIONAL FORCE
AND OBSERVERS MEDAL**



**INTER-AMERICAN
DEFENSE BOARD MEDAL**



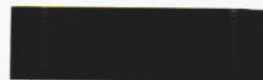
**REPUBLIC OF VIETNAM
CAMPAIGN MEDAL**



**KUWAIT LIBERATION MEDAL
(Kingdom of Saudi Arabia)**



**EXPERT RIFLEMAN
MEDAL**



**EXPERT PISTOL SHOT
MEDAL**

DEVICES



GOLD STAR

Denotes each subsequent award of the same Navy decoration.



SILVER STAR

Worn in the same manner as the gold star, in lieu of five gold stars.



BRONZE SERVICE STAR

The bronze five-pointed service star represents participation in campaigns or operations, multiple qualification or an additional award to any of the various ribbons on which it is authorized. Also worn to denote first award of the single mission air medal after Nov. 22, 1989.



SILVER SERVICE STAR

Worn in the same manner as the bronze star, but each silver star is worn in lieu of five bronze service stars.



BRONZE OAK LEAF CLUSTER

The bronze oak leaf cluster represents second and subsequent entitlements of awards.



SILVER OAK LEAF CLUSTER

A silver oak leaf cluster is worn for the sixth, 11th, or in lieu of five bronze oak leaf clusters.



WINTERED OVER

For wintering over on the Antarctic continent, a clasp for Antarctica Service Medal, suspension ribbon and a disc for the service ribbon of bronze for first winter, gold for second winter, silver for third winter.



"V" DEVICE

The metallic bronze letter "V" is authorized for acts or service involving direct participation in combat operations.



HOURLASS

Issued for each succeeding award of the Armed Forces Reserve Medal.



EUROPE AND ASIA CLASPS

Worn on the suspension ribbon of the Navy Occupation Service Medal.



STRIKE/FLIGHT DEVICE

Bronze arabic numeral denotes the total number of strike/flight awards of the Air Medal earned subsequent to April 9, 1962.



FLEET MARINE FORCE COMBAT OPERATIONS INSIGNIA

For Navy personnel attached to fleet Marine force units participating in combat operations.







The above display represents the correct order of precedence for ribbons most likely to be worn today on the Navy uniform. Devices worn on these ribbons must be worn in a specific manner and are used to denote additional awards or participation in a specific event. For additional information about the proper order of display, placement of devices or about ribbons not shown, refer to SECNAVINST 1650.1F and U.S. Navy Uniform Regulation (NAVPERS 1566.5G).

Ranks & Insignia














Rank Insignia of Navy Commissioned Officers (O)

Paygrade/Rank	Caps, shoulder, collar	Shoulder "boards"	Sleeve
O-1 Ensign	gold 		
O-2 Lieutenant Junior Grade	silver 		
O-3 Lieutenant	silver 		
O-4 Lieutenant Commander	gold 		
O-5 Commander	silver 		
O-6 Captain	silver 		
O-7 Rear Admiral (Lower Half)	silver 		
O-8 Rear Admiral (Upper Half)	silver 		
O-9 Vice Admiral	silver 		
O-10 Admiral	silver 		
O-11 Fleet Admiral	silver 		







Rank Insignia of Navy Warrant Officers (W)

Paygrade/Rank	Caps, shoulder, collar	Shoulder "boards"	Sleeve
W-1 Chief Warrant Officer			
W-2 Chief Warrant Officer			

Rank Insignia of Navy Enlisted People (E)

Paygrade/Rank	Hat and collar	Sleeve
E-1 Seaman Recruit		
E-2 Seaman Apprentice		
E-3 Seaman		
E-4 Petty Officer Third Class		
E-5 Petty Officer Second Class		
E-6 Petty Officer First Class		
E-7 Chief Petty Officer		
E-8 Senior Chief Petty Officer		
E-9 Master Chief Petty Officer		
E-9 Master Chief Petty Officer Of The Navy		

Rank Insignia of Navy Warrant Officers (W)

Paygrade/Rank	Caps, shoulder, collar	Shoulder "boards"	Sleeve
W-3 Chief Warrant Officer			
W-4 Chief Warrant Officer			

Navy Enlisted Ratings



AB
Aviation Boatswain's Mate
(used at paygrade E-9 only)
ABE (Launching and Recovery
Equipment)
ABF (Fuels)
ABH (Aircraft Handling)



AC
Air Traffic Controller



AD
Aviation Machinist's Mate



AE
Aviation Electrician's Mate



AG
Aerographer's Mate



AK
Aviation Storekeeper



AM
Aviation Structural Mechanic
(used at paygrade E-8 only)
AME (Safety Equipment)
AMH (Hydraulics)
AMS (Structures)



AO
Aviation Ordnanceman



AS
Aviation Support Equipment Technician



AT
Aviation Electronics Technician



AW
Aviation Warfare System Operators



AZ
Aviation Maintenance Administrationman



BM
Boatswain's Mate



BT
Boiler Technician



BU
Builder



CE
Construction Electrician



CM
Construction Mechanic



CT
Cryptologic Technician
CTA (Administrative)
CTI (Interpretive)
CTM (Maintenance)
CTO (Communications)
CTR (Collection)
CTT (Technical)



DC
Damage Controlman



DK
Disbursing Clerk



DM
Illustrator Draftsman



DP
Data Processing Technician



DS
Data Systems Technician



DT
Dental Technician



EA
Engineering Aide



EM
Electrician's Mate



EN
Engineman



EO
Equipment Operator



ET
Electronics Technician



EW
Electronics Warfare Technician



FC
Fire Controlman



GM
Gunner's Mate
(used at paygrade E-7 and above)
GMG (Guns)
GMM (Missiles)



GS
Gas Turbine System Technician
(used at paygrade E-9 only)
GSE (Electrical)
GSM (Mechanical)



HM
Hospital Corpsman



HT
Hull Maintenance Technician



IC
Interior Communications Electrician



IM
Instrumentman



IS
Intelligence Specialist



JO
Journalist



LI
Lithographer



LN
Legalman



MA
Master-at-Arms



ML
Molder



MM
Machinist's Mate



MN
Mineman



MR
Machinery Repairman



MS
Mess Management Specialist



MT
Missile Technician



MU
Musician



NC
Navy Counselor



OM
Opticalman

Navy Enlisted Ratings



OS
Operations Specialist



OT
Ocean Systems Technician
(used at paygrade E-9 only)
OTA (Analyst)
OTM (Maintainer)



PC
Postal Clerk



PH
Photographer's Mate



PM
Patternmaker



PN
Personnelman



PR
Aircrew Survival Equipmentman



QM
Quartermaster



RM
Radioman



RP
Religious Program Specialist



SH
Ship's Serviceman



SK
Storekeeper



SM
Signalman



ST
Sonar Technician
STG (Surface)
STS (Submarine)



SW
Steelworker



TM
Torpedoman's Mate



UT
Utilitiesman

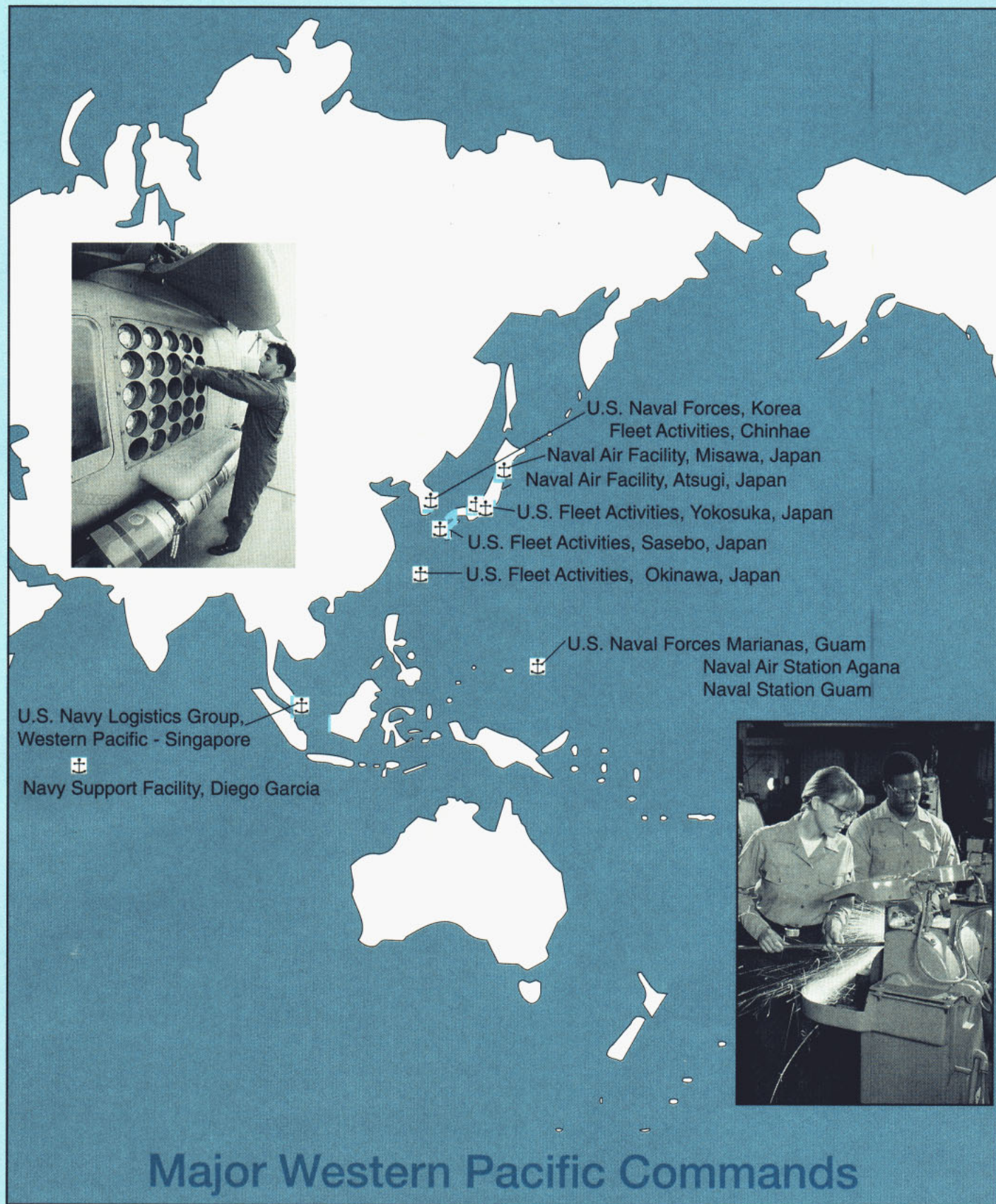


WT
Weapons Technician



YN
Yeoman





CHARTS - Major Naval Commands

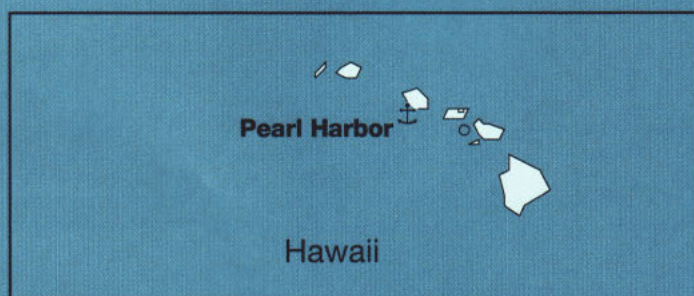


Puget Sound

San Francisco

Long Beach

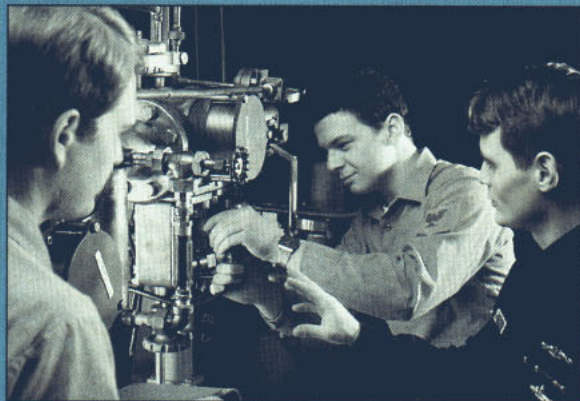
San Diego



Pearl Harbor

Hawaii

South Texas



Commander-in-Chief
U.S. Naval Forces Europe
London, U.K.

U.S. 6th Fleet,
Mediterranean
Homeport - Gaeta, Italy



U.S. 7th Fleet,
Western Pacific,
Indian Ocean -
Forward Deployed
Yokosuka, Japan

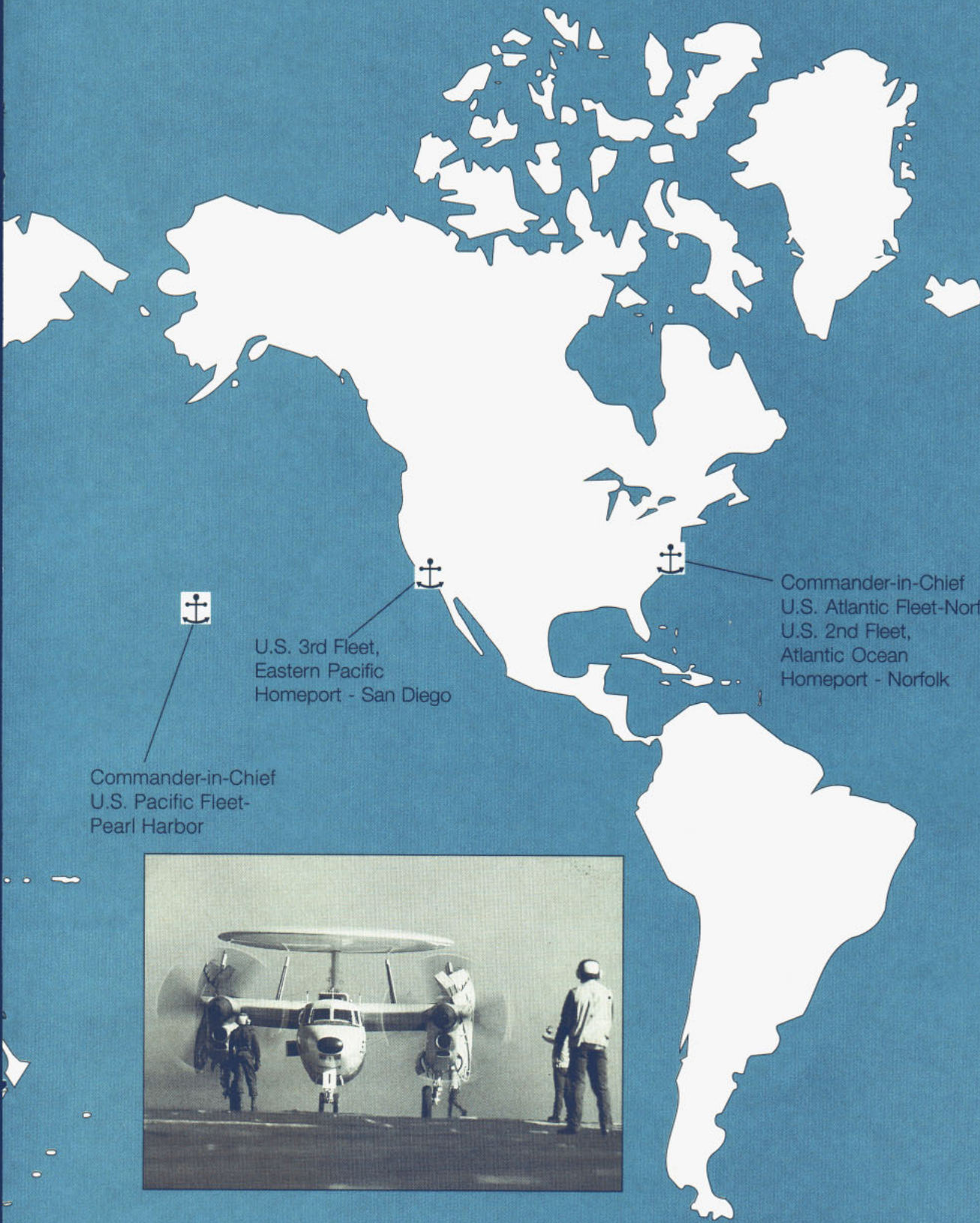
U.S. Naval Forces
Central Command --
Red Sea, Persian Gulf and
North Arabian Sea
Manama, Bahrain



The system of numbered fleets provides command and control for naval forces operating in a particular region of the world. Navy personnel, ships and aircraft are assigned to operate under the guidance of these regional fleet commanders.

All Navy units fall under the cognizance of a numbered

fleet commander when they deploy. In certain circumstances, operational control shifts from the numbered fleet commander to a theater or joint task force commander. For example, in the Persian Gulf and Red Sea, operational control of Navy units has been turned over to the naval component of the U.S. Central Command.



Commander-in-Chief
U.S. Pacific Fleet-
Pearl Harbor

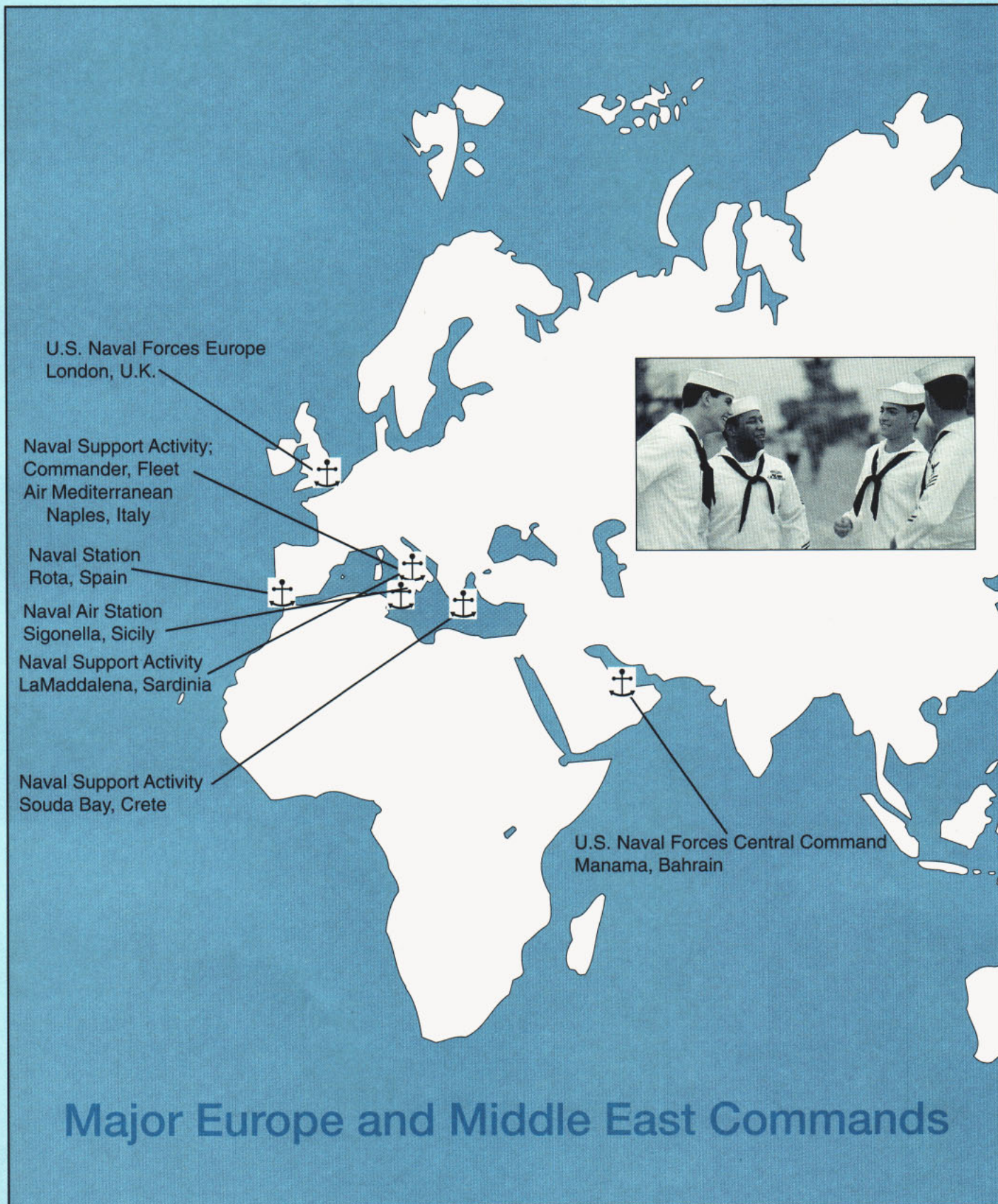


U.S. 3rd Fleet,
Eastern Pacific
Homeport - San Diego



Commander-in-Chief
U.S. Atlantic Fleet-Norfolk
U.S. 2nd Fleet,
Atlantic Ocean
Homeport - Norfolk





All Hands FY94 Monthly Basic Pay Chart*

Pay Grade	Cumulative Years of Service															Proposed Basic Allowance for Quarters Dependents		
	Under 2	Over 2	Over 3	Over 4	Over 6	Over 8	Over 10	Over 12	Over 14	Over 16	Over 18	Over 20	Over 22	Over 24	Over 26	Full	Partial	With
Enlisted Members																		
E-9						2496.90	2552.70	2610.60	2670.60	2730.30	2783.40	2929.20	3043.20	3214.20		443.40	18.60	584.10
E-8	0.00	0.00	0.00	0.00	0.00	2093.70	2153.70	2210.40	2267.70	2327.70	2381.10	2439.60	2582.70	2697.90	2870.40	407.10	15.30	538.50
E-7	1461.60	1578.00	1636.20	1693.80	1751.40	1807.20	1865.10	1923.30	2010.30	2067.30	2124.60	2152.20	2296.80	2411.10	2582.70	347.40	12.00	500.10
E-6	1257.60	1370.70	1427.70	1488.60	1544.40	1599.90	1658.70	1744.20	1798.80	1857.00	1885.20					314.70	9.90	462.30
E-5	1103.40	1201.20	1259.70	1314.30	1401.00	1458.00	1515.60	1571.40	1599.90							290.10	8.70	415.50
E-4	1029.30	1087.20	1151.10	1239.90	1288.80											252.30	8.10	361.50
E-3	969.90	1023.00	1063.80	1105.80												247.80	7.80	336.30
E-2	933.30	933.30	933.30													201.30	7.20	320.10
E-1	832.80	832.80														179.10	6.90	320.10
E-1	770.10	(Less than 4 mos. active duty)										As senior enlisted advisor, MCPON (E-10) basic is 3822.60				179.10	6.90	320.10
Midm	543.90																	
Warrant Officers																		
W-4	2146.20	2302.50	2302.50	2355.30	2462.40	2570.70	2678.70	2866.20	2999.10	3104.40	3187.50	3290.40	3400.50	3506.40	3665.40	539.70	25.20	608.70
W-3	1950.60	2115.90	2115.90	2143.20	2168.10	2326.80	2462.40	2542.80	2623.50	2701.80	2785.80	2894.40	2999.10	2999.10	3104.40	453.60	20.70	558.00
W-2	1708.50	1848.30	1848.30	1902.00	2005.80	2115.90	2196.30	2276.70	2355.30	2438.10	2517.90	2597.10	2701.80			402.60	15.90	513.30
W-1	1423.20	1632.00	1632.00	1768.20	1848.30	1927.50	2005.80	2088.90	2168.10	2248.80	2326.80	2410.20				337.20	13.80	444.00
Commissioned Officers																		
O-10	6801.60	7040.70	7040.70	7040.70	7040.70	7311.00	7311.00	7716.00	7716.00	8267.70	8267.70	8821.50	8821.50	8821.50	9371.10	730.50	50.70	899.10
O-9	6027.90	6185.70	6317.40	6317.40	6317.40	6478.20	6478.20	6747.60	6747.60	7311.00	7311.00	7716.00	7716.00	7716.00	8267.70	730.50	50.70	899.10
O-8	5459.70	5623.50	5756.70	5756.70	5756.70	6185.70	6185.70	6478.20	6478.20	6747.60	7040.70	7311.00	7491.30			730.50	50.70	899.10
O-7	4536.60	4845.00	4845.00	4845.00	5062.20	5062.20	5355.60	5355.60	5623.50	6185.70	6611.10					730.50	50.70	899.10
O-6	3362.40	3694.20	3936.30	3936.30	3936.30	3936.30	3936.30	3936.30	4070.10	4713.60	4954.20	5062.20	5355.60	5536.80	5808.60	670.20	39.60	809.70
O-5	2689.20	3157.50	3375.90	3375.90	3375.90	3375.90	3478.20	3665.40	3911.10	4203.90	4444.50	4579.50	4739.40			645.30	33.00	780.30
O-4	2266.80	2760.30	2944.50	2944.50	2999.10	3131.40	3345.00	3533.10	3694.20	3856.50	3962.70					598.20	26.70	687.90
O-3	2106.30	2355.30	2517.90	2785.80	2919.00	3023.70	3187.50	3345.00	3427.20							479.40	22.20	569.40
O-2	1836.90	2005.80	2410.20	2491.20	2542.80											380.10	17.70	486.30
O-1	1594.80	1659.90	2005.80													320.10	13.20	434.40
Officers With More Than Four Years Active Duty as Enlisted or Warrant																		
O-3E	0.00	0.00	0.00	2785.80	2919.00	3023.70	3187.50	3345.00	3478.20							517.50	22.20	611.70
O-2E	0.00	0.00	0.00	2491.20	2542.80	2623.50	2760.30	2866.20	2944.50							440.10	17.70	552.00
O-1E	0.00	0.00	0.00	2005.80	2143.20	2222.10	2302.50	2382.60	2491.20							378.30	13.20	510.00

1994 Basic Allowance for Subsistence

Enlisted

Rations in kind not available

On leave or authorized to mess separately

Emergency conditions/no govt. mess avail.

< Four Months

\$7.08 per day

\$6.28 per day

\$9.39 per day

All Others

\$ 7.67 per day

\$ 6.80 per day

\$10.16 per day

Officers (Incl. commissioned, warrants and aviation cadets)

\$142.46 per month

Source: OASD (P&R)/(MM&PP) Compensation

Monthly Career Sea Pay Chart

Pay Grade	1 or Less	Over 1	Over 2	Over 3	Over 4	Over 5	Over 6	Over 7	Over 8	Over 9	Over 10	Over 11	Over 12	Over 13	Over 14	Over 16	Over 18	Over 20
Enlisted Members																		
E-9	100.00	100.00	120.00	175.00	190.00	350.00	350.00	375.00	390.00	400.00	400.00	410.00	420.00	450.00	475.00	520.00		
E-8	100.00	100.00	120.00	175.00	190.00	350.00	350.00	375.00	390.00	400.00	400.00	410.00	420.00	450.00	475.00	500.00	520.00	
E-7	100.00	100.00	120.00	175.00	190.00	350.00	350.00	375.00	390.00	400.00	400.00	410.00	420.00	450.00	475.00	500.00		
E-6	100.00	100.00	120.00	150.00	170.00	316.00	325.00	350.00	350.00	365.00	365.00	365.00	380.00	395.00	410.00	425.00	450.00	
E-5	50.00	60.00	120.00	150.00	170.00	316.00	325.00	350.00										
E-4	50.00	60.00	120.00	150.00	160.00													
Warrant Officers																		
W-5	150.00	150.00	150.00	150.00	170.00	290.00	310.00	310.00	310.00	310.00	350.00	375.00	400.00	400.00	450.00	450.00	500.00	
W-4	150.00	150.00	150.00	150.00	170.00	290.00	310.00	310.00	310.00	310.00	350.00	375.00	400.00	400.00	450.00	450.00	500.00	
W-3	150.00	150.00	150.00	150.00	170.00	270.00	280.00	285.00	290.00	310.00	350.00	375.00	400.00	400.00	425.00	450.00	450.00	
W-2	150.00	150.00	150.00	150.00	170.00	260.00	265.00	265.00	270.00	310.00	340.00	340.00	375.00	375.00	400.00			
W-1	130.00	135.00	140.00	150.00	170.00	175.00	200.00	250.00	270.00	300.00	325.00	325.00	340.00	340.00	360.00	375.00		
Commissioned Officers																		
O-6			225.00	230.00	230.00	240.00	255.00	265.00	280.00	290.00	300.00	310.00	310.00	325.00	240.00	265.00	380.00	
O-5			225.00	225.00	225.00	230.00	230.00	245.00	250.00	260.00	265.00	265.00	265.00	285.00	300.00	215.00	340.00	
O-4			185.00	190.00	200.00	205.00	215.00	220.00	220.00	225.00	225.00	240.00	240.00	270.00	280.00	290.00	300.00	
O-3			150.00	160.00	185.00	190.00	195.00	205.00	215.00	225.00	225.00	240.00	240.00	260.00	270.00	280.00	290.00	
O-2			150.00	160.00	185.00	190.00	195.00	205.00	215.00	225.00	225.00	240.00	240.00	250.00	260.00	270.00	280.00	
O-1			150.00	160.00	185.00	190.00	195.00	205.00	215.00	225.00	225.00	240.00	240.00	250.00	260.00	270.00	280.00	

Source: Defense Finance and Accounting Service

Monthly Submarine Pay

Pay Grade	2 or Less	Over 2	Over 3	Over 4	Over 6	Over 8	Over 10	Over 12	Over 14	Over 16	Over 18	Over 20	Over 22	Over 24	Over 26
Enlisted Members															
E-9	225.00	225.00	225.00	270.00	295.00	310.00	315.00	330.00	345.00	355.00	355.00	355.00	355.00	355.00	355.00
E-8	225.00	225.00	225.00	250.00	270.00	295.00	310.00	315.00	330.00	345.00	355.00	355.00	355.00	355.00	355.00
E-7	225.00	225.00	225.00	250.00	255.00	265.00	275.00	295.00	310.00						
E-6	155.00	170.00	175.00	215.00	230.00	245.00	255.00	265.00							
E-5	140.00	155.00	155.00	175.00	190.00	195.00									
E-4	80.00	95.00	100.00	170.00	175.00										
E-3	80.00	90.00	95.00	95.00	140.00	90.00									
E-2	75.00	90.00													
E-1	75.00														
Warrant Officers															
W-1 to W-5	235.00	310.00	310.00	355.00	355.00	355.00	355.00	355.00	355.00	355.00	355.00	355.00	355.00	355.00	355.00
Commissioned Officers															
O-8 to O-10	355.00	355.00	355.00	355.00	355.00	355.00	355.00	355.00	355.00	355.00	355.00	355.00	355.00	355.00	355.00
O-7	355.00	355.00	355.00	355.00	355.00	355.00	355.00	355.00	355.00	540.00	535.00	535.00	410.00	410.00	355.00
O-6	595.00	595.00	595.00	595.00	595.00	595.00	595.00	595.00	595.00	595.00	595.00	595.00	595.00	595.00	595.00
O-5	595.00	595.00	595.00	595.00	595.00	595.00	595.00	595.00	595.00	595.00	595.00	595.00	595.00	595.00	595.00
O-4	365.00	365.00	365.00	405.00	595.00										
O-3	355.00	365.00	365.00	390.00	595.00										
O-2	235.00	235.00	235.00	235.00	235.00	235.00	355.00								
O-1	175.00	175.00	175.00	175.00	175.00	175.00	355.00								

Source: Defense Finance and Accounting Service

Aviation Career Incentive Pay

Phase I	
Years of Aviation Service	Monthly Amount
2 or less	\$125
Over 2	\$156
Over 3	\$188
Over 4	\$206
Over 6	\$650
Phase II	
Years of Service as an Officer	Monthly Amount
Over 18	\$585
Over 20	\$495
Over 22	\$385
Over 25	\$250

Source: Defense Finance and Accounting Service

Hazardous Duty Incentive Pay

Pay Grade	Monthly Amount
E-7 to E-9	\$200
E-6	\$175
E-5	\$150
E-4	\$125
E-1 to E-3	\$110
W-5	\$250
W-4	\$250
W-3	\$175
W-2	\$150
W-1	\$125
O-10	\$110
O-9	\$110
O-8	\$110
O-7	\$110
O-6	\$250
O-5	\$250
O-4	\$225
O-3	\$175
O-2	\$150
O-1	\$125

Source: Defense Finance and Accounting Service

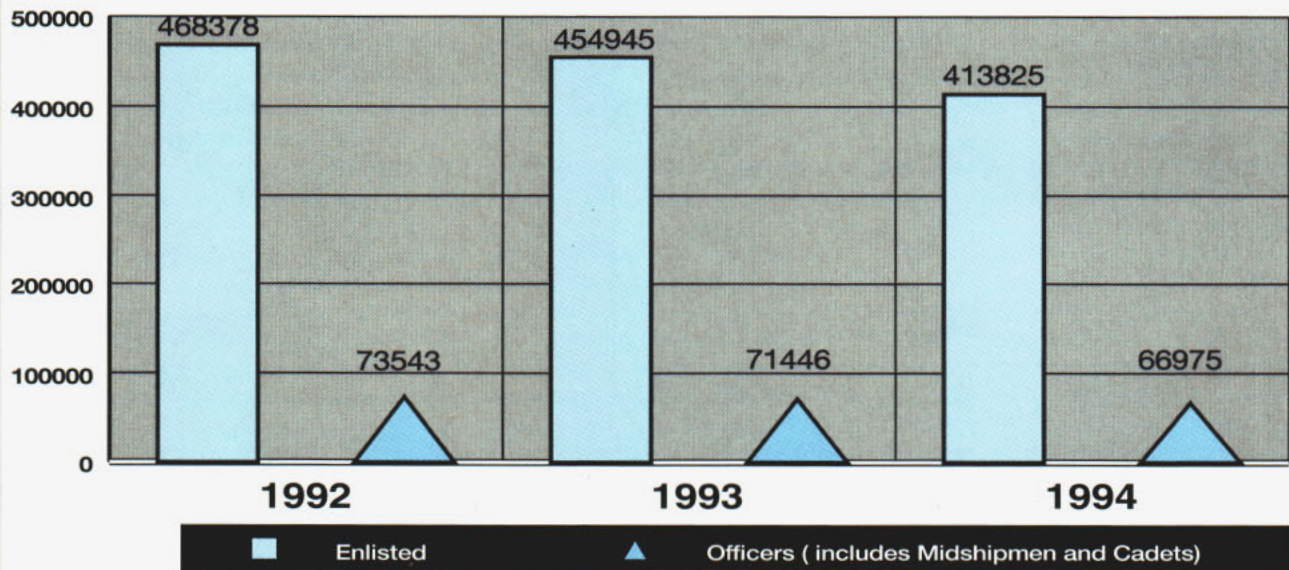
Civilian (General Schedule) Pay Scale as of November 1, 1993 Within-grade Step Increases

	One	Two	Three	Four	Five	Six	Seven	Eight	Nine	Ten
GS-1	11,903	12,300	12,695	13,090	13,487	13,720	14,109	14,503	14,521	14,891
GS-2	13,382	13,701	14,145	14,521	14,683	15,115	15,547	15,979	16,411	16,843
GS-3	14,603	15,090	15,577	16,064	16,551	17,038	17,525	18,012	18,499	18,986
GS-4	16,393	16,939	17,485	18,031	18,577	19,123	19,669	20,215	20,761	21,307
GS-5	18,340	18,951	19,562	20,173	20,784	21,395	22,006	22,617	23,228	23,839
GS-6	20,443	21,124	21,805	22,486	23,167	23,848	24,529	25,210	25,891	26,572
GS-7	22,717	23,474	24,231	24,988	25,745	26,502	27,259	28,016	28,773	29,530
GS-8	25,159	25,998	26,837	27,676	28,515	29,354	30,193	31,032	31,871	32,710
GS-9	27,789	28,715	29,641	30,567	31,493	32,419	33,345	34,271	35,197	36,123
GS-10	30,603	31,623	32,643	33,663	34,683	35,703	36,723	37,743	38,763	39,783
GS-11	33,623	34,744	35,865	36,986	38,107	39,228	40,349	41,470	42,591	43,712
GS-12	40,298	41,641	42,984	44,327	45,670	47,013	48,356	49,699	51,042	52,385
GS-13	47,920	49,517	51,114	52,711	54,308	55,905	57,502	59,099	60,696	62,293
GS-14	56,627	58,515	60,403	62,291	64,179	66,067	67,955	69,843	71,731	73,619
GS-15	66,609	68,829	71,049	73,269	75,489	77,709	79,929	82,149	84,369	86,589

The above standard salary rates cover the majority of white-collar workers in the competitive service, but there are exceptions. Pay rates for Senior Level (SL) and Scientific and Professional (ST) positions range from \$79,931 to \$115,700. These replace grades GS-16 through GS-18, which have been abolished. Senior Executive Service (SES) pay rates range from \$92,900 to \$115,700.
Source: Defense Finance and Accounting Service

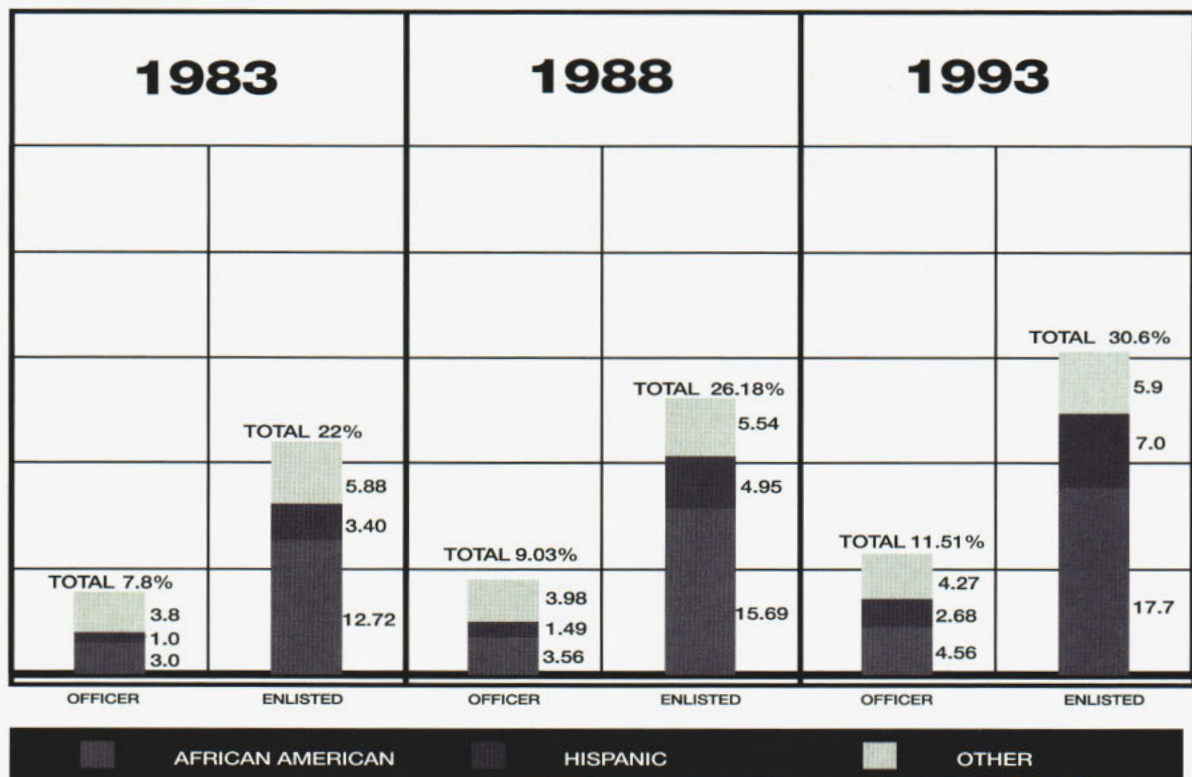
Source: Defense Finance and Accounting Service

Active Navy Military Personnel



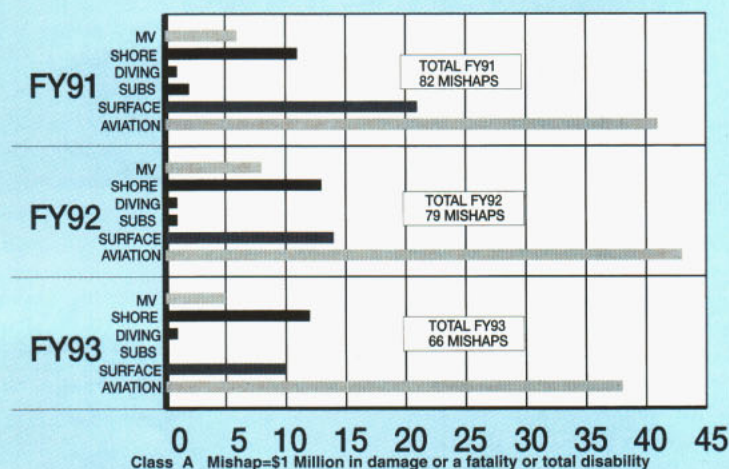
Source: Highlights of the FY 94 DON Budget

Minority Representation



Source: Bureau of Naval Personnel

Navy Operational Class A Mishaps



Medical Statistics



Outpatient visits:	11,989,056
Admissions:	190,899
Inpatient visits:	1,220,732
Occupied bed days:	823,650
Births:	21,764

Average length of stay: 4.3 days

Source: Bureau of Naval Medicine



U.S. Navy Economic Impact

U.S. Navy port visits to Broward County, Fla., contribute more than \$48 million a year to the community.

Source: The Broward Economic Development Council, Inc.

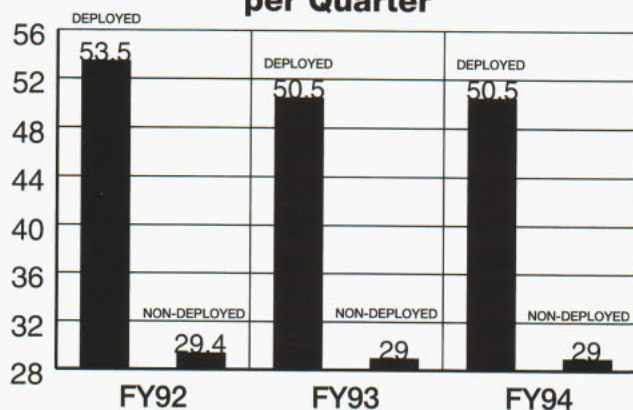
The Navy's direct economic impact on Virginia's Hampton Roads area is almost \$7 billion a year (1993).

Source: Commander, Naval Base Norfolk.

The Navy's direct economic impact in the San Diego area is almost \$9.5 billion a year (1993).

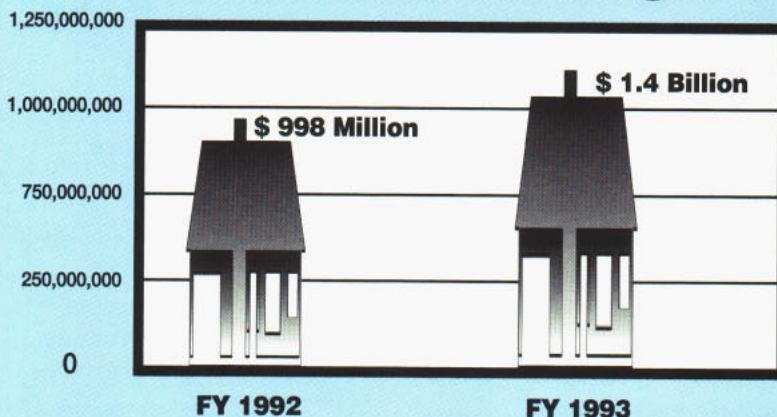
Source: Commander, Naval Base San Diego.

Ships Steaming Days per Quarter



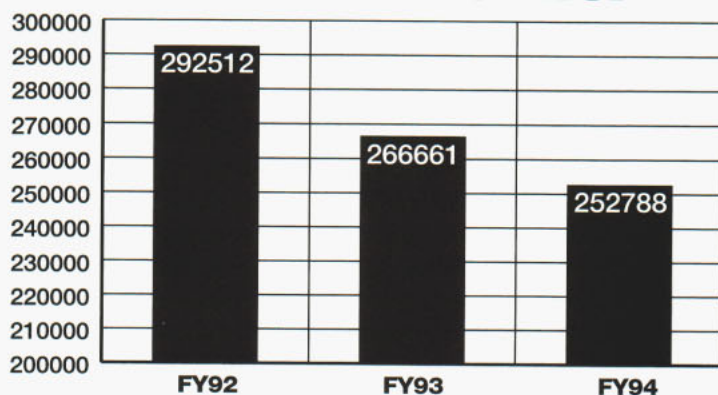
Source: Highlights of the FY1994 DON Budget

Family Housing



Source: Highlights of the FY1994 DON Budget

Civilian Personnel



Source: Highlights of the FY1994 DON Budget

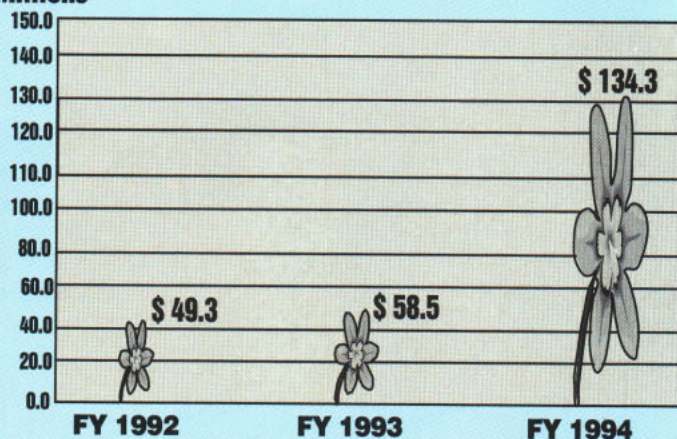
Women In The Navy



Source: OASD-PA

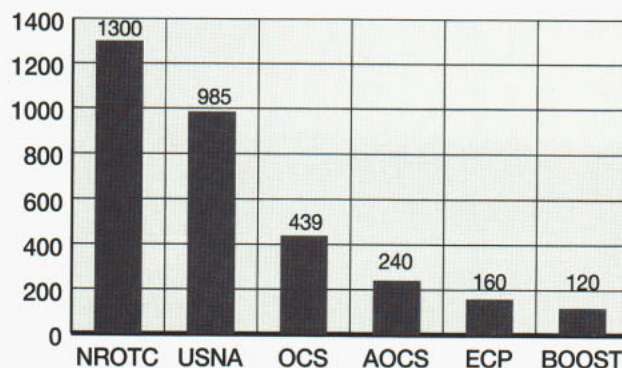
Navy Pollution Abatement Programs

\$ Millions



Source: Highlights of the FY1994 DON Budget

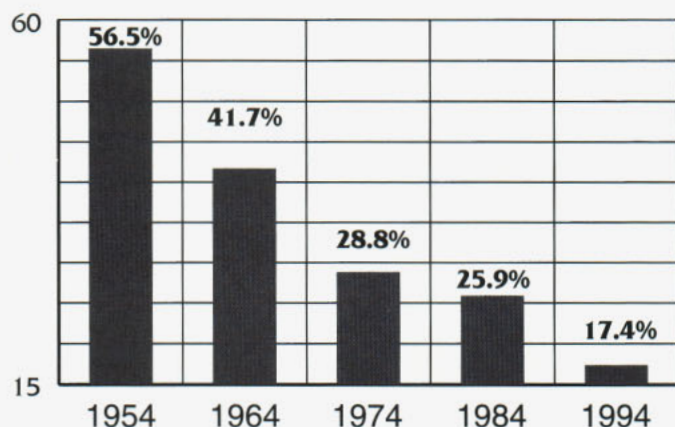
Commissions FY 92



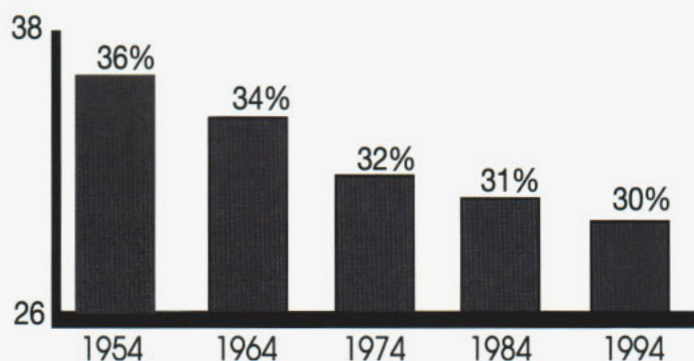
Also: 720 Limited duty officers, warrant & other sources
888 Direct commissions

Sources: Bureau of Naval Personnel & Chief of Naval Education and Training

DoD % of Total Federal Budget

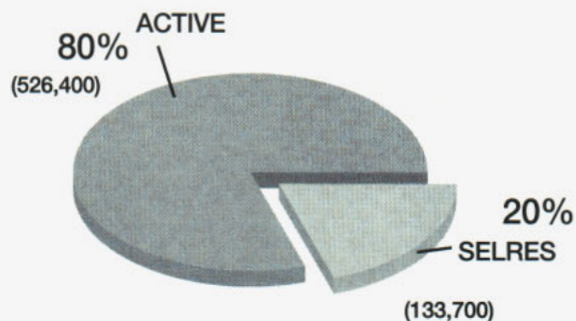


Navy % of DoD Outlays



NAVY MANPOWER FY93

ACTIVE/RESERVE FY93*



Source: Commander Naval Reserve Forces

* INCLUDES FULL-TIME SUPPORT

Health and Medical Benefits

The Navy provides medical care for all active-duty service members and their families. Medical care is free at any military medical treatment facility (MTF). Active-duty members' families, retirees and their families may receive care at any MTF if the service they require is available. If family members are unable to receive care at a military MTF, and they must go to a civilian health care provider, the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) will help to pay the cost.

Other health care benefits for active duty personnel and their families includes:

Dental care for active duty personnel.

Delta Dental Plan for family members of active duty.

CHAMPUS Program for the Handicapped for disabled family members.

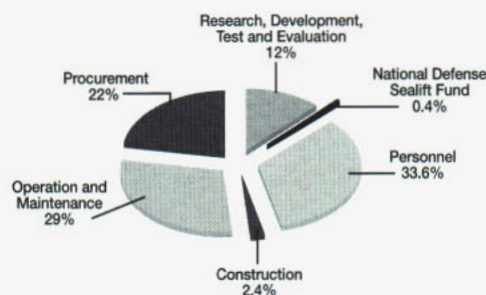
24 in-patient centers for the treatment of alcoholism.

85 counseling and assistance centers (CAACs) for out-patient alcohol abusers and compulsive over-eaters.

Psychological counseling.

Source: Bureau of Naval Personnel Sea Legs

Total Obligational Authority/Budget \$77 Billion for FY94



In real terms, the FY94 Department of the Navy budget decreased 13.1 percent from FY93.

Source: Highlights of the FY1994 DON Budget

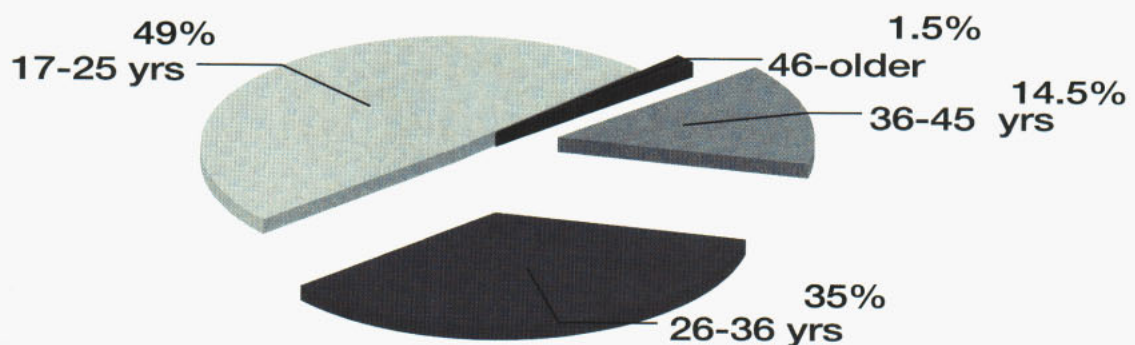
Educational Programs

Program for Afloat College Education (PACE)
Tuition Assistance
Servicemember's Opportunity Colleges, Navy (SOCNav)
Naval Academy Prep School (NAPS)
U.S. Naval Academy
Apprenticeship Program
American Council on Education (ACE)
Defense Activity for Non-Traditional Education Support (DANTES)
Enlisted Education Advancement Program (EEAP)
Enlisted Commissioning Program
Broadened Opportunity for Officer Selection and Training (BOOST)
Education and Training Management Subspecialty

Department of Veterans Affairs Education Programs
Veterans Educational Assistance Program (VEAP)
Chapter 30, Montgomery GI Bill (MGIB)
Selected Reserve GI Bill (RMGIB), Chapter 106

Source: Bureau of Naval Personnel

Navy Demographic Breakdown (by age)



Active duty Officer and Enlisted

Naval Reserve Command Locations

Pacific Coast Naval Reserve Force (NRF) homeports:

Seattle, Wash.
Tacoma, Wash.
San Francisco, Calif.
San Diego, Calif.
Long Beach, Calif.



Seabees:

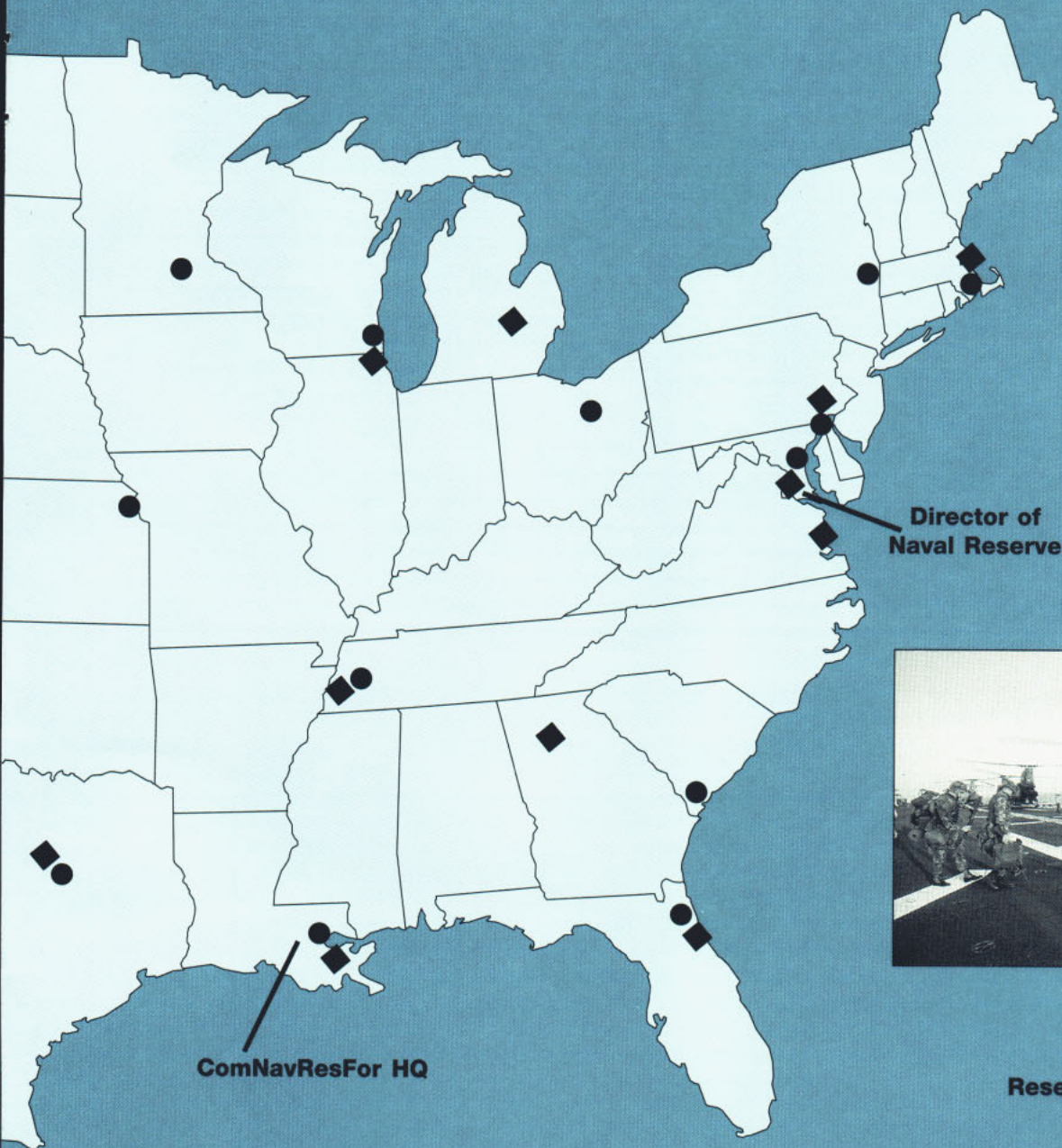
6 Regiments
15 Battalions



◆ Naval Reserve Air Sites:

Atlanta, Ga.
Whidbey Island, Wash.
Dallas, Tex.
Norfolk, Va.
Glenview, Ill.
Pt. Mugu, Calif.
Alameda, Calif.

Willow Grove, Penn.
San Diego, Calif.
Jacksonville, Fla.
Washington, D.C.
South Weymouth, Mass.
New Orleans, La.
Memphis, Tenn.
Detroit, Mich.



Atlantic Coast Naval Reserve Force (NRF) homeports:

Newport, R.I.
 Staten Island, N.Y.
 Norfolk, Va.
 Charleston, S.C.
 Mobile, Ala.
 Ingleside, Tex.

Director of Naval Reserve

ComNavResFor HQ



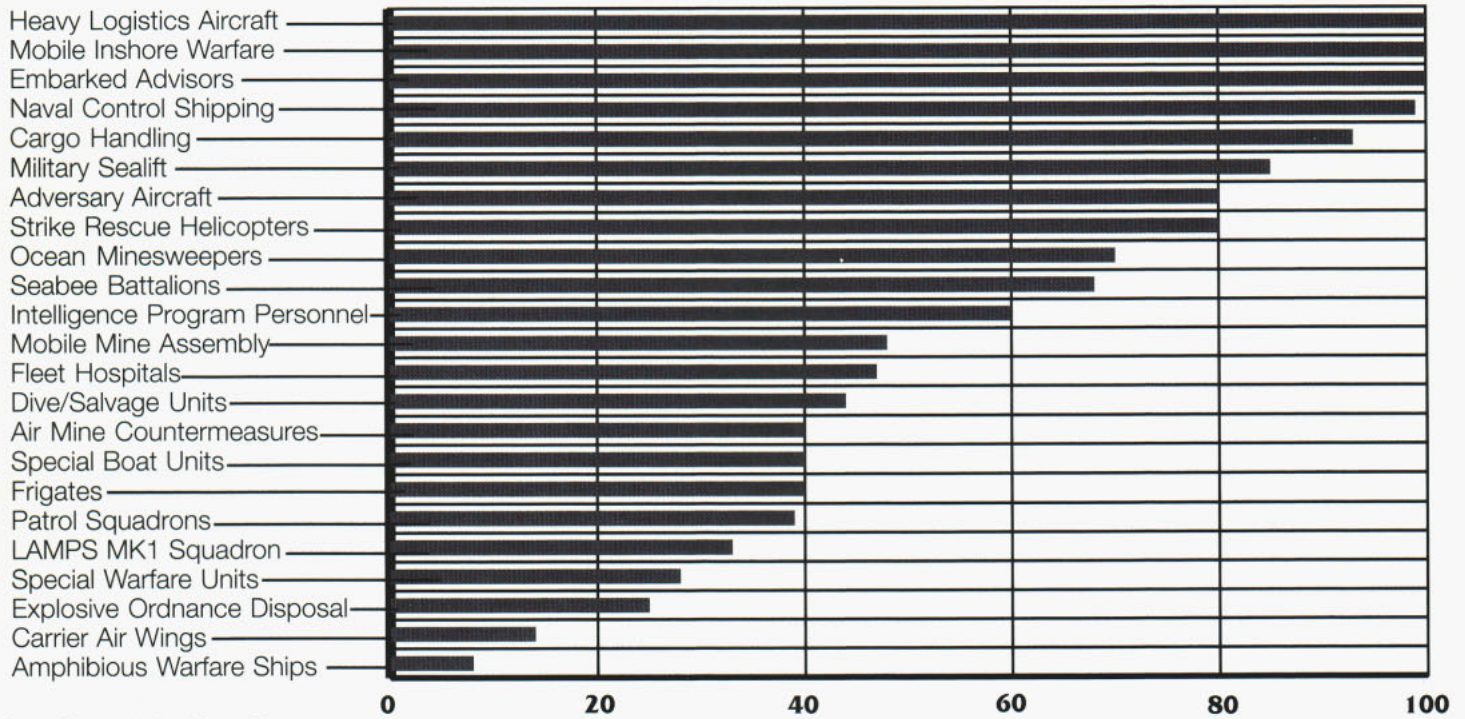
Reserve Centers — 218

● Readiness Command Sites:

Newport, R.I.	Philadelphia, Penn.
Ravenna, Oh.	Jacksonville, Fla.
Scotia, N.Y.	Washington, D.C.
Charleston, S.C.	Seattle, Wash.
Olathe, Kans.	New Orleans, La.
Memphis, Tenn.	Dallas, Tex.
San Diego, Calif.	San Francisco, Calif.
Minneapolis, Minn.	Great Lakes, Ill.

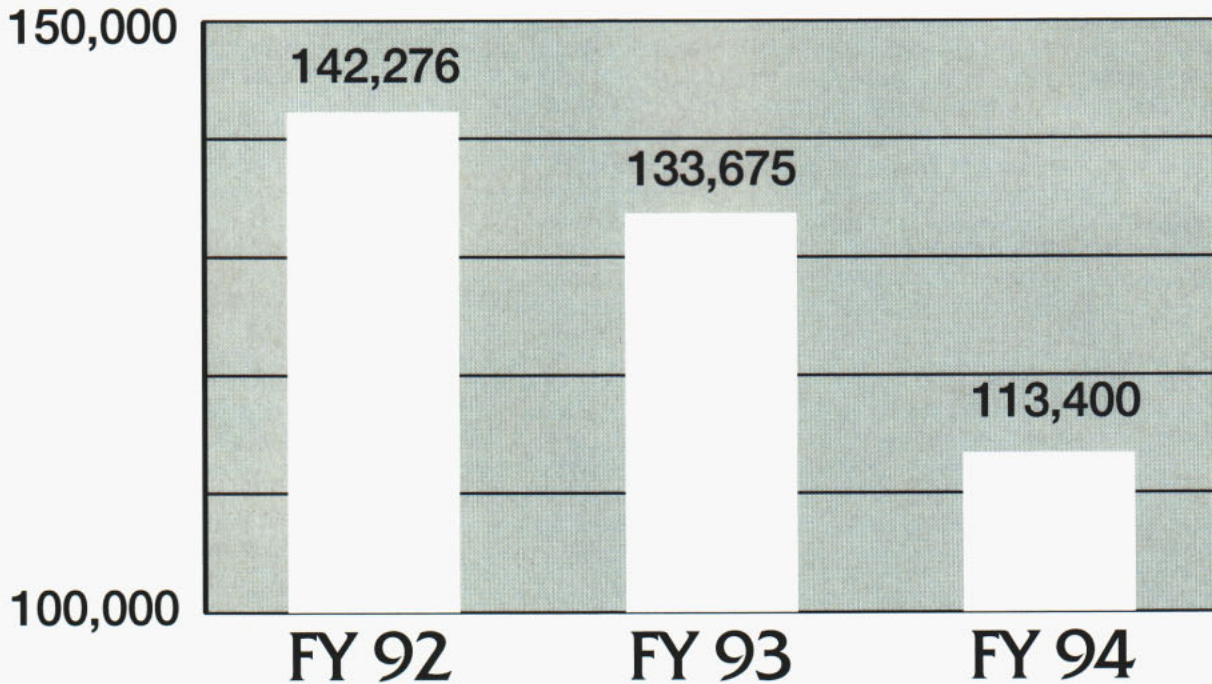
Major Naval Reserve Mission Areas

(Percentage of Navy's Total Capability)



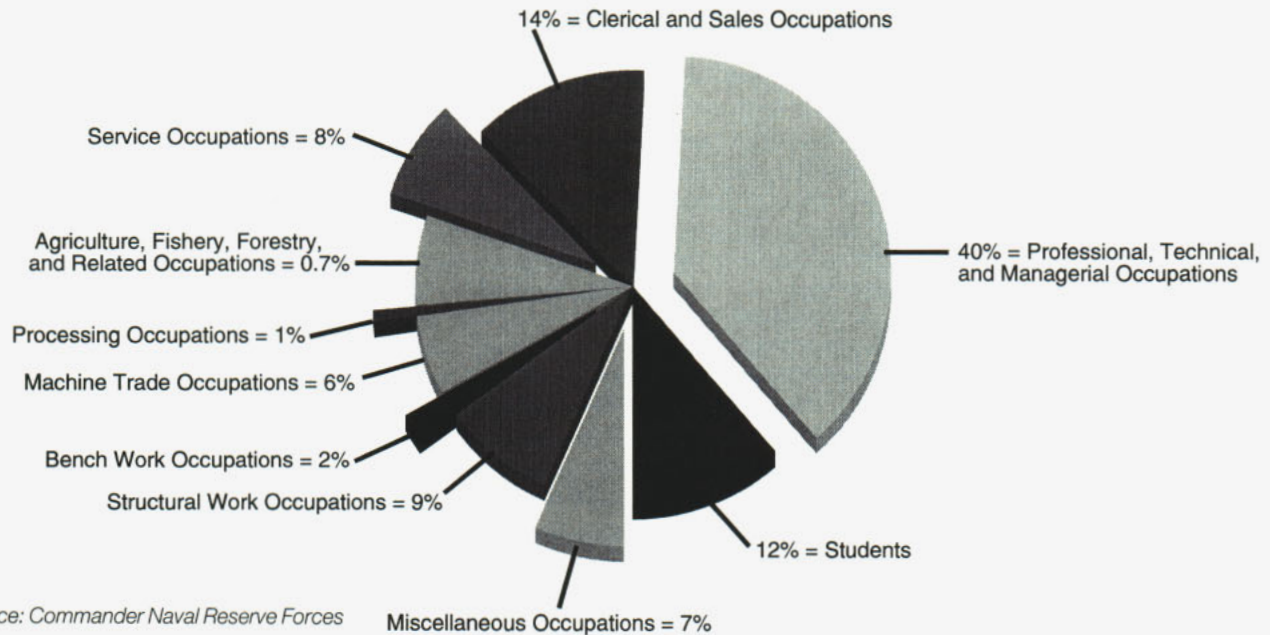
Source: Commander Naval Reserve Forces

U.S. Naval Reserve



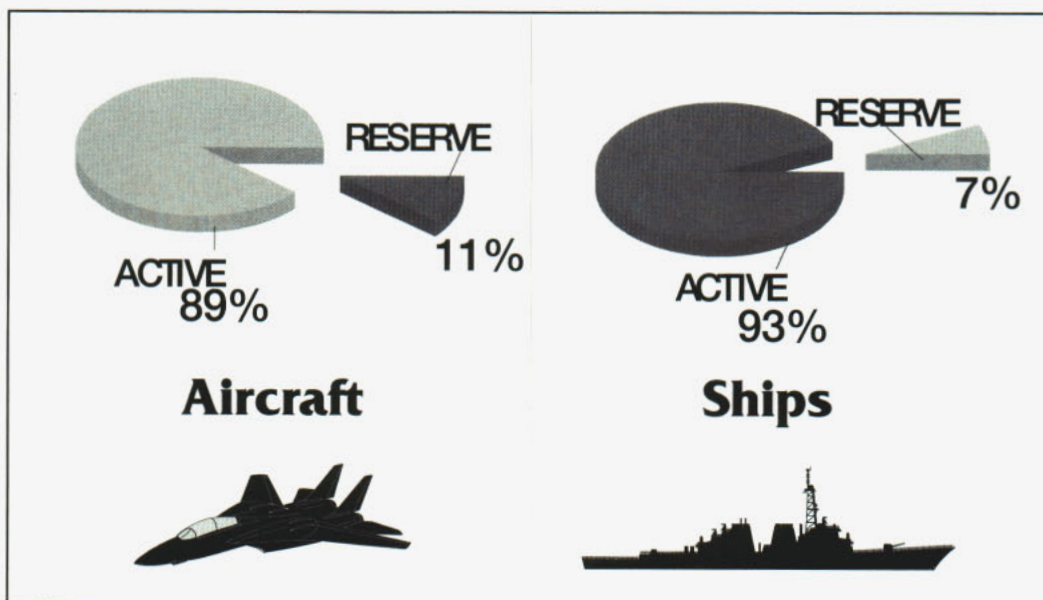
Source: Highlights of the FY94 Department of the Navy Budget

Number of Naval Reservists in civilian occupational fields



NAVY FORCE STRUCTURE

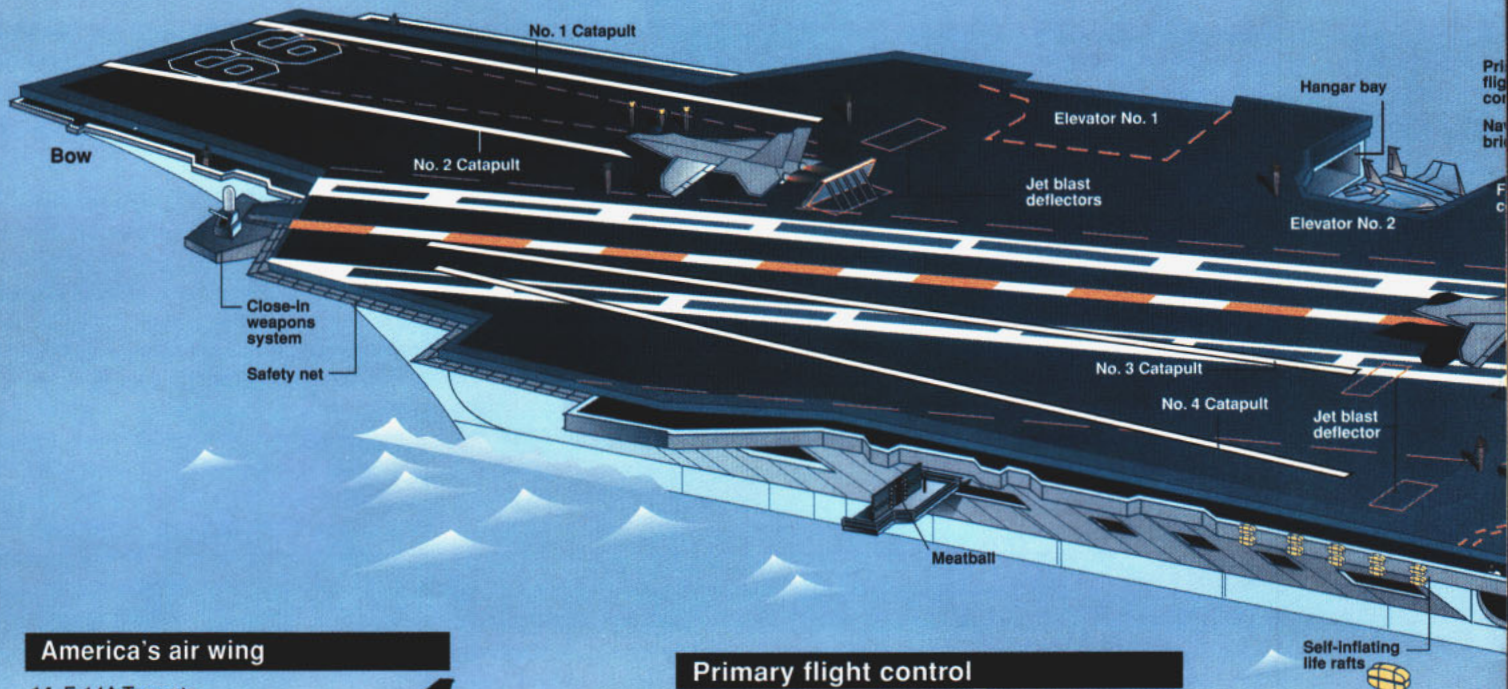
ACTIVE/RESERVE FY93










Source: Commander Naval Reserve Forces

FLYING OFF A CARRIER

The America is a very big ship but a very small airport. With 70 planes in its air wing, some waiting to take off, others ready to land and still others parked on deck, flight operations are a game of inches and seconds. Pilots landing at the stern of the ship have almost no margin for error: If an F-14 lands more than 10 feet left or right of the center line in the landing area, its wings could rip through aircraft parked on either side. In a landing area only about 750 feet long—many commercial airport runways are 10,000 feet—pilots must bring their jets down in almost the same spot every time. Flying too low means a potentially fatal crash into the ship's stern; flying even 4 feet too high means "boltering"—missing the four arresting wires and having to try again. This game of inches also must beat the clock. The America's crew can launch two planes at a time and land one every 37 seconds in the daytime and one every minute at night.



America's air wing

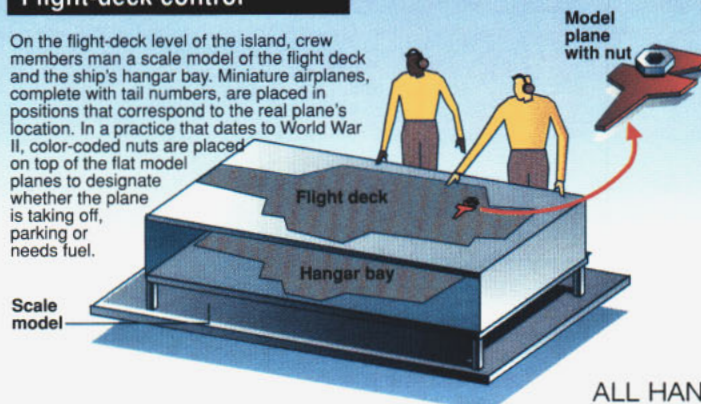
- 14 F-14A Tomcats
Fighter 
- 22 F/A-18C Hornets
Fighter/Bomber 
- 14 A-6E Intruders
Bomber 
- 4 EA-6B Prowlers
Electronic warfare 
- 4 E-2C Hawkeyes
Airborne command and control 
- 6 S-3B Vikings
Antisubmarine warfare 
- 6 SH-3H Sea Kings
Antisubmarine helicopter 

Primary flight control

One level up from the navigation bridge on the ship's island, "primary" is home of the yellow-jerseyed air boss. The boss, typically a former squadron commander, controls takeoffs, landings and the movement of planes on the flight deck and in the air around the ship.

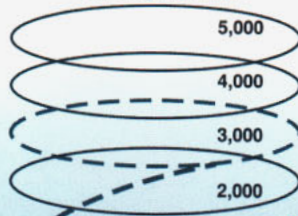
Flight-deck control

On the flight-deck level of the island, crew members man a scale model of the flight deck and the ship's hangar bay. Miniature airplanes, complete with tail numbers, are placed in positions that correspond to the real plane's location. In a practice that dates to World War II, color-coded nuts are placed on top of the flat model planes to designate whether the plane is taking off, parking or needs fuel.



LANDING: RECOVERY

Hawking the deck

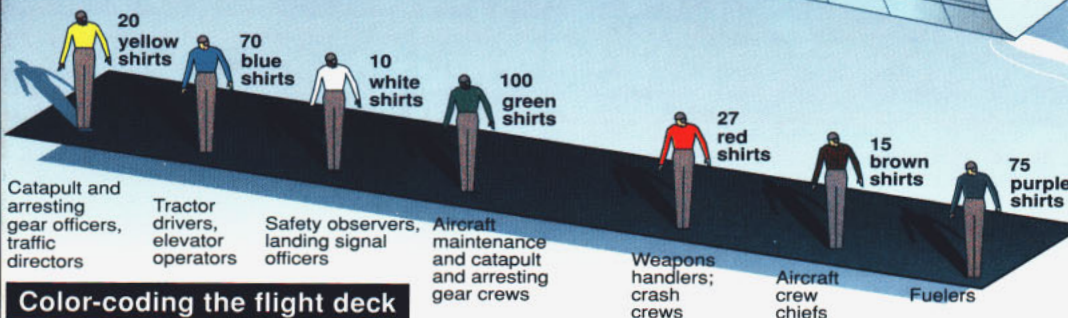
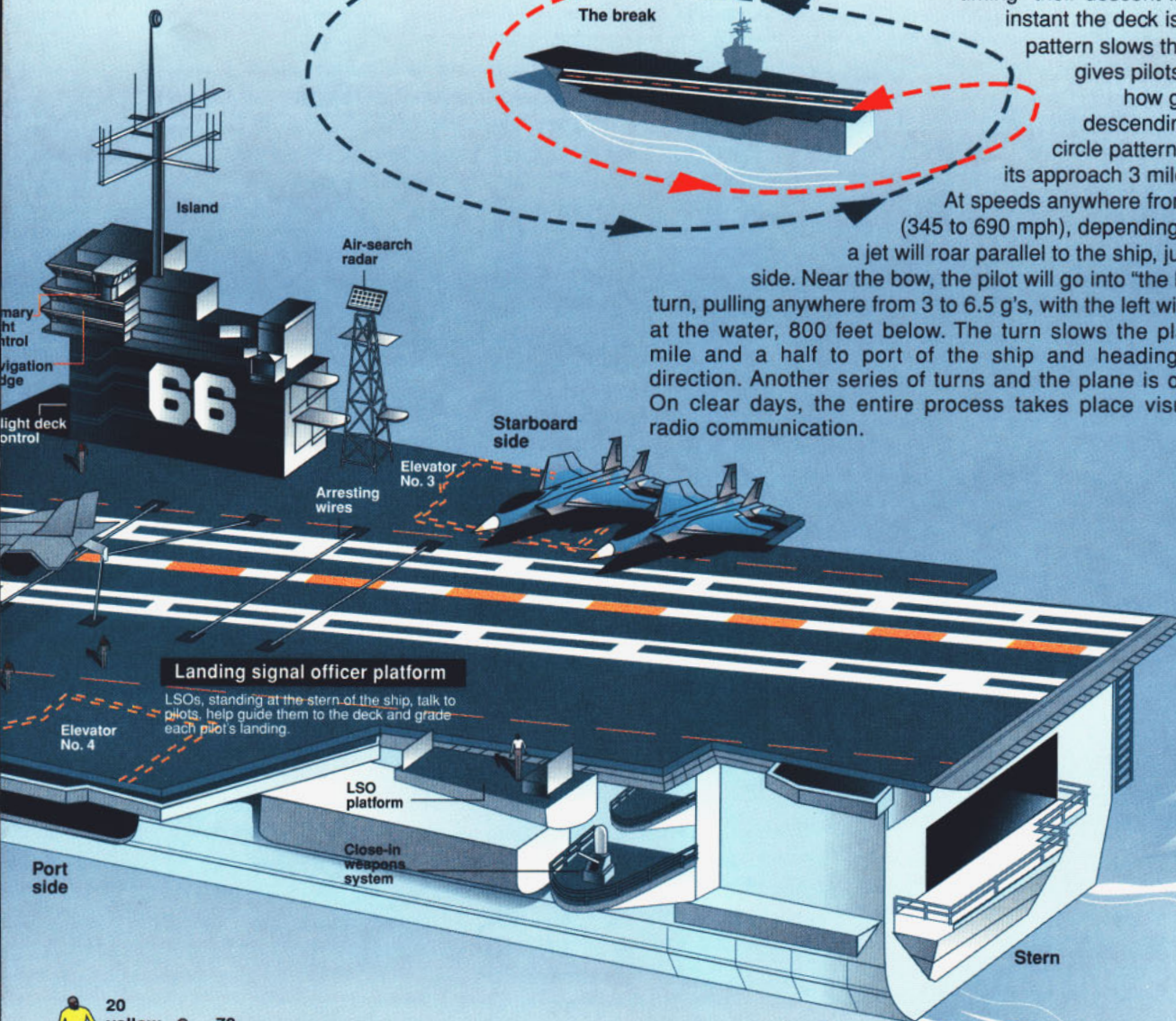


It is hard enough to land on a ship; fighter pilots compete to make the tough maneuver look good. In daylight, aircraft fly a five-mile circle just to port of the carrier, watching, or "hawking," the deck. Planes short on fuel are poised to land first: F/A-18s circle at 2,000 feet, F-14s and EA-6Bs at 3,000 feet, A-6s at 4,000 feet, E-2s and S-3s at 5,000 feet. Each time he passes the ship, a pilot must judge whether it is time to land. When the last aircraft are ready to launch off the two catapults in the

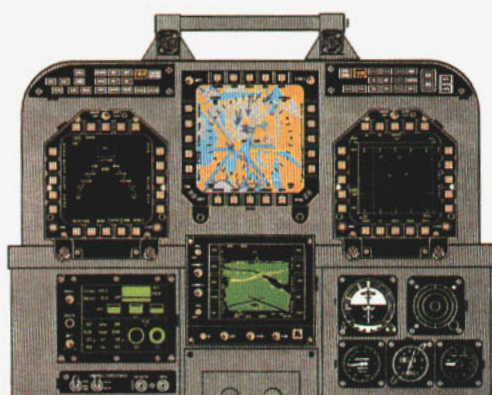
landing area, the first F/A-18s will begin their approach, timing their descent in order to land the instant the deck is clear. The landing pattern slows the aircraft and also gives pilots a chance to show how good they are. After descending out of the 5-mile circle pattern, a plane will begin its approach 3 miles behind the ship.

At speeds anywhere from 300 to 600 knots (345 to 690 mph), depending on the pilot's skill, a jet will roar parallel to the ship, just off the starboard side.

Near the bow, the pilot will go into "the break": a sharp left turn, pulling anywhere from 3 to 6.5 g's, with the left wing pointed straight at the water, 800 feet below. The turn slows the plane, now flying a mile and a half to port of the ship and heading in the opposite direction. Another series of turns and the plane is on course to land. On clear days, the entire process takes place visually, without any radio communication.



Adapted from the Feb. 28, 1994 issue of U.S. News & World Report. Story by Bruce Auster; Illustration by Rod Little



F/A-18F Rear Cockpit



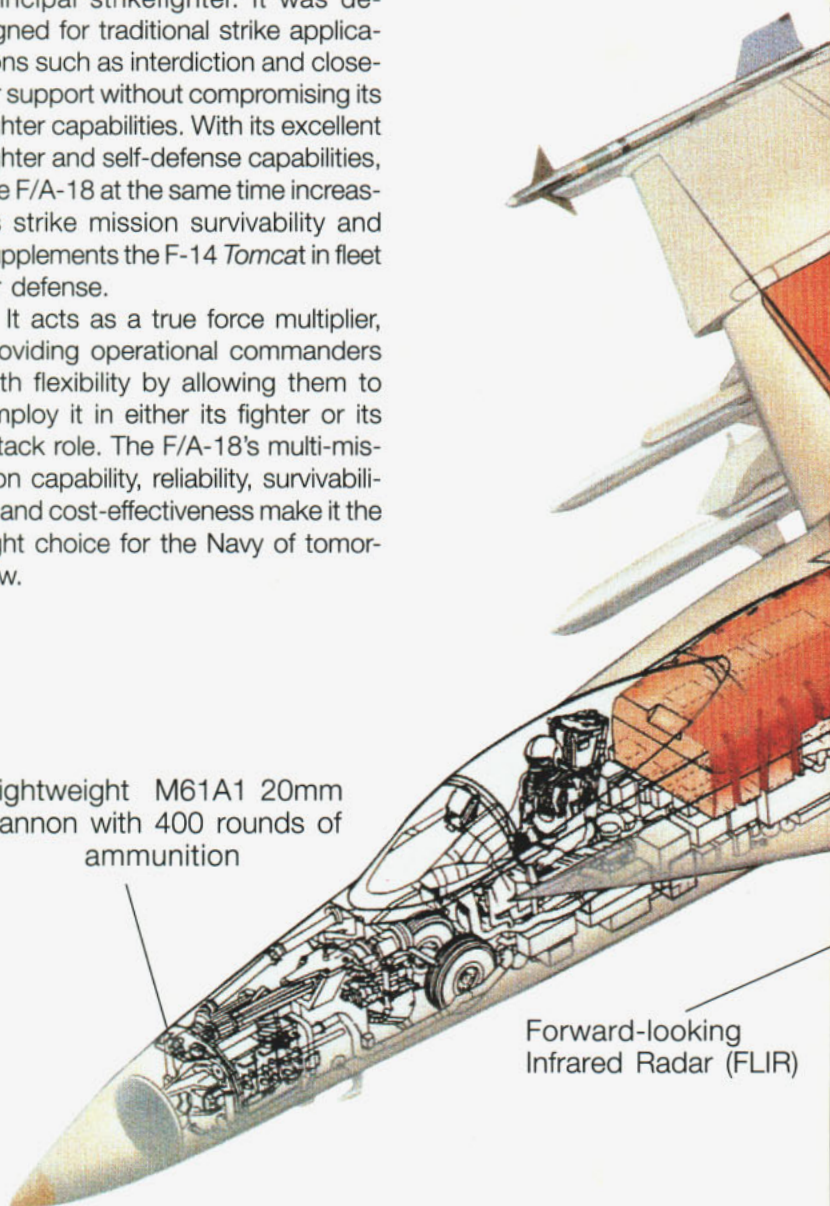
F/A-18E/F Cockpit

The F/A-18 *Hornet* is the Navy's principal strikefighter. It was designed for traditional strike applications such as interdiction and close-air support without compromising its fighter capabilities. With its excellent fighter and self-defense capabilities, the F/A-18 at the same time increases strike mission survivability and supplements the F-14 *Tomcat* in fleet air defense.

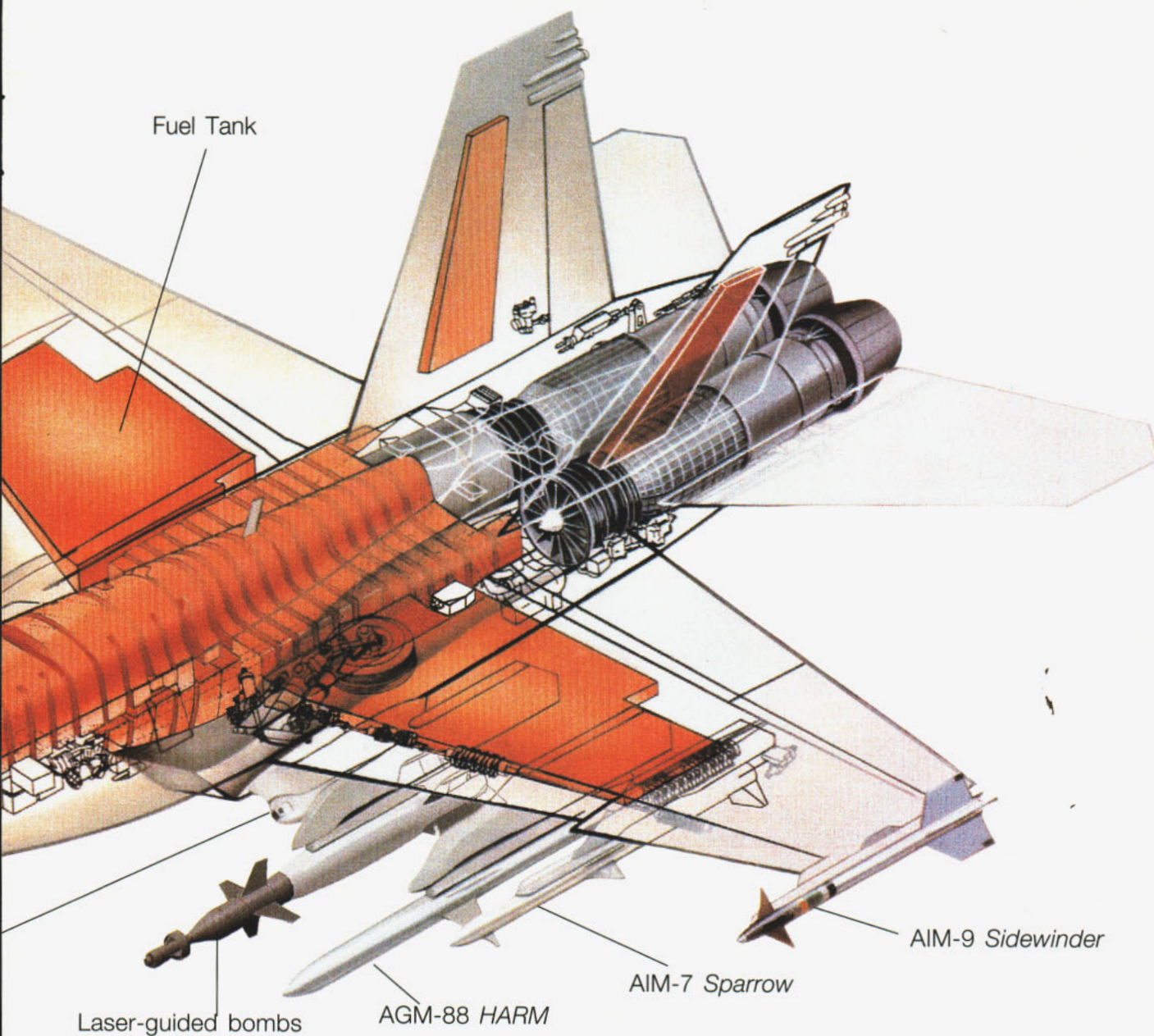
It acts as a true force multiplier, providing operational commanders with flexibility by allowing them to employ it in either its fighter or its attack role. The F/A-18's multi-mission capability, reliability, survivability and cost-effectiveness make it the right choice for the Navy of tomorrow.

Lightweight M61A1 20mm cannon with 400 rounds of ammunition

Forward-looking Infrared Radar (FLIR)



The F/A-18E/F is currently in development. It is expected to become operational in 2000.



Characteristics

Length: 60.3 ft.

Width: 44.9 ft.

Height: 16.0 ft.

Speed: > Mach 1.8

Max. takeoff gross weight: 66,000 lb. (approx)

Combat ceiling: 50,000 ft.

The F/A-18F is a dual-seat version.

(Artwork courtesy of McDonnell-Douglas.)



F/A-18C/D Hornet

The F/A-18 *Hornet* is a strike-fighter with applications for interdiction and close-air support.

Dimensions: Wingspan, 37 feet 5 inches; length, 56 feet; height, 15 feet 3 inches. Speed: Mach 1.7+. Range: (Fighter) 400 nautical miles (internal fuel); (Attack) 550 nautical miles. Armament: One 20mm Mk-61A1 *Vulcan* cannon; Fighter mission: *Sparrow III*, *Sidewinder*; Attack mission: Guided and conventional air-to-ground ordnance, FLIR/LDT pods. Crew: One.



A-6E Intruder

The A-6E is an all-weather, two-seat, subsonic, carrier-based attack aircraft, designed to destroy both fixed and moving targets at sea or ashore.

Dimensions: Wingspan, 53 feet; length, 54 feet 8 inches; height, 15 feet 6 inches. Speed: 563 knots. Armament: Bombs, rockets and air-to-surface missiles. Crew: Two.

EA-6B Prowler

The EA-6B is an all-weather, four-seat, subsonic, carrier-based tactical electronic warfare aircraft.

Dimensions: Wingspan, 53 feet; length 59 feet 10 inches; height 16 feet 3 inches. Speed: 541 knots. Armament: AGM-88A *HARM*. Crew: Four.



F/14A Tomcat

The F/14A *Tomcat* is a supersonic, twin-engine, variable sweep wing, two-place fighter.

Dimensions: Wingspan, 64.1 feet unswept; length, 62 feet 9 inches; height, 16 feet. Speed: Mach 2+. Armament: Six *Phoenix* AIM-54A missiles, four *Sparrow* missiles, four *Sidewinder* missiles, one 20mm Mk-61A1 *Vulcan* cannon. Crew: Two.



E-2C Hawkeye

The E-2C *Hawkeye* is the Navy's all-weather, carrier based tactical airborne warning and control system platform.

Dimensions: Wingspan, 80 feet 17 inches; length, 57 feet 6 inches; height, 18 feet 3 inches. Speed: 320 knots. Crew: five.



E-6A Aircraft

The E-6A provides secure, survivable, jam-resistant strategic communications relay for fleet ballistic missile submarines.

Dimensions: Wingspan, 148 feet; length 150 feet; height, 42 feet. Speed: .88 Mach. Range: 1,000 nautical miles, with six hours loiter time. Crew: Four flight, five mission.



S-3 Viking

The S-3 *Viking* is a carrier-based, subsonic, all-weather, long-range, high-endurance turboprop powered aircraft, designed to seek and destroy enemy submarines and provide surveillance of surface shipping.

Dimensions: Wingspan, 68 feet 8 inches; length, 53 feet 4 inches; height, 22 feet 9 inches. Speed: 450 knots. Armament: Four MK-46 torpedoes, bombs, mines, two *Harpoons* (S-3B). Range: 2,300 + nautical miles. Crew: Four.



SH-3H Sea King

The *SH-3H* detects, classifies, tracks and destroys enemy submarines and provides logistic support and search and rescue capability while deployed aboard an aircraft carrier. The *Sea King* is being replaced by *SH-60F* helicopters.

Dimensions: Length, 73 feet; height 17 feet. Speed: 166 mph. Range: 542 nautical miles. Crew: Four.



T-45A Goshawk

The T-45A is the aircraft component of the T45TS integrated jet pilot training system.

Dimensions: Wingspan 30.8 feet; length, 39.2 feet; height, 13.4 feet. Speed: .85 mach. Range: 825 nautical miles. Crew: Two (pilot, student pilot).



P-3C Orion

The P-3C is a land-based, long-range ASW patrol aircraft. It detects, classifies, localizes, tracks and destroys enemy high performance submarines and performs surface surveillance.

Dimensions: Wingspan, 99 feet 7 inches; length, 116 feet 3 inches; height, 37 feet 1 inch. Speed: 324 knots. Armament: MK 46 torpedoes, *Bullpup* air-to-ground missiles, *Harpoon* (AGM-84) cruise missile and sonobuoys. Range: Max mission radius: 2,390 nautical miles; for three hours on station at 1,500 feet; 1,346 nautical miles. Crew: 10.



CH-53 Sea Stallion

The primary mission of the CH-53A/D is to transport supplies and equipment; its secondary mission is to transport personnel and conduct evacuations.

Dimensions: Main rotor diameter, 72 feet 3 inches; length, 88 feet 3 inches (with rotors turning); height, 24 feet 11

inches. Speed: 160 knots. Range: 578 nautical miles.



C-130 Hercules

The versatile C-130 has been proving its worth for more than three decades. It provides logistic support, air-to-air refueling, very low frequency strategic communications and assault transport.

Dimensions: Wingspan, 133 feet; length, 99 feet 5 inches, height, 38 feet 3 inches.



C-9B Skytrain II

The C-9B is the military version of the commercial DC-9 Series 32CF airliner. The Navy uses it for intratheater airlift and to transport critically needed spare parts and other logistic support materials as well as to airlift Naval Reservists to and from their training sites.

Dimensions: Wingspan, 93 feet; length, 119 feet; height, 28 feet. Speed: 438 knots. Range: 2,538 nautical miles. Crew: Two (plus cabin attendants).



UH-46 Sea Knight

The *Sea Knight* is another example of a durable and versatile aircraft that still is providing valuable service more than two decades after it was first flown.

Dimensions: Length, 84 feet; height, 17 feet. Speed: 165 mph. Range: 206 nautical miles; ferry range, 530 nautical miles. Crew: Three.



SH-60 Seahawk

The SH-60 extends the sensors and weapons systems capabilities of surface combatants for anti-submarine warfare, anti-ship surveillance and targeting.

Dimensions: Rotor diameter, 53 feet 8 inches; length 64 feet 10 inches (with rotors turning); height, 17 feet. Speed: 130 knots. Range: (SH-60B) 100 nautical miles with two hours on station. (SH-60F) 50 nautical miles with three hours on station. Armament: (SH-60B) Two MK 46 torpedoes; (SH-60F) up to three Mk-46 or three Mk-50 torpedoes. Crew: (SH-60B) Three; (SH-60F) four.



SH-2F Seasprite

The *Seasprite* is a ship-based, anti-submarine (ASW) and anti-ship surveillance and targeting (ASST) helicopter.

Dimensions: Length, 53 feet; height, 14 feet 6 inches. Speed: 144 mph. Range: 367 nautical miles. Crew: Three.



C-2A Greyhound

The C-2A provides critical logistics support to aircraft carriers deployed throughout the world through its primary mission of Carrier On-board Delivery (COD).

Dimensions: Wingspan, 81 feet; length, 57 feet; height, 16 feet. Speed: 320 knots. Range: 1,440 nautical miles.



Dixie-Class Destroyer Tender (AD)

19 Yosemite



Samuel Gompers-Class Destroyer Tender (AD)

37 Samuel Gompers
38 Puget Sound



Yellowstone-Class Destroyer Tender (AD)

41 Yellowstone
42 Acadia
43 Cape Cod
44 Shenandoah



Suribachi-Class Ammunition Ship (AE)

21 Suribachi
22 Mauna Kea



Nitro-Class Ammunition Ship (AE)

23 Nitro
24* Pyro
25** Haleakala



Kilauea-Class Ammunition Ship (AE)

27 Butte
28 Santa Barbara
29 Mount Hood
32 Flint
33 Shasta
34 Mount Baker
35 Kiska



Mars-Class Fast Combat Store Ship (AFS)

2* Sylvania
3* Niagara Falls
4 White Plains
6 San Diego
7* San Jose



Auxiliary Command Ship (AGF)

3 La Salle
11 Coronado



Cimarron-Class Fleet Oiler (AO)

177 Cimarron
178 Monongahela
179 Merrimack
180 Willamette
186 Platte



Sacramento-Class Fast Combat Support (AOE)

1 Sacramento
2 Camden
3 Seattle
4 Detroit



Wichita-Class Replenishment Oiler (AOR)

2* Milwaukee
3 Kansas City
4 Savannah
5* Wabash
6 Kalamazoo
7 Roanoke



Diver/Bolster-Class Fleet Support Ship (ARS)

38** Bolster
39** Conservor
40** Hoist
42** Reclaimer
43** Recovery



Safeguard-Class Fleet Support Ship (ARS)

50 Safeguard
51 Grasp
52 Salvor
53 Grapple



Fulton-Class Submarine Tenders (AS)

18 Orion



Hunley-Class Submarine Tenders (AS)

31* Hunley
32 Holland



Simon Lake-Class Submarine Tenders (AS)

33 Simon Lake
34 Canopus



L.Y. Spear-Class Submarine Tenders (AS)

36 L.Y. Spear
37 Dixon



Pigeon-Class Fleet Support Ship (ASR)

22 Ortolan



Emory S. Land-Class Submarine Tenders (AS)

39 Emory S. Land
40 Frank Cable
41 McKee



Chanticleer-Class Fleet Support Ships (ASR)

13** Kittiwake
15* Sunbird



Vulcan-Class Repair Ships (AR)

8 Jason



Edenton-Class Fleet Support Ships (ATS)

1 Edenton
2 Beaufort
3 Brunswick



Leahy-Class Cruisers (CG)

19** Dale
20** Richmond K. Turner
21** Gridley
22** England
23** Halsey
24* Reeves
25 Bainbridge



Belknap-Class Cruisers (CG)

26 Belknap
27** Josephus Daniels
29** Jouett
30** Horne
31** Sterett
32** William H. Standley
33 Fox
35 Truxton



Ticonderoga-Class Cruisers (CG)

47 Ticonderoga
48 Yorktown
49 Vincennes
50 Valley Forge
51 Thomas S. Gates
52 Bunker Hill
53 Mobile Bay
54 Antietam
55 Leyte Gulf
56 San Jacinto
57 Lake Champlain
58 Philippine Sea
59 Princeton
60 Normandy
61 Monterey
62 Chancellorsville
63 Cowpens
64 Gettysburg

NOTE: * Approved to decommission

**** Proposed decommissions**

- 65 Chosin
- 66 Hue City
- 67 Shiloh
- 68 Anzio
- 69 Vicksburg
- 70 Lake Erie
- 71 Cape St. George



Long Beach-Class Cruiser (CGN)
9* Long Beach



California-Class Cruiser (CGN)
36 California
37 South Carolina



Virginia-Class Cruiser (CGN)
38* Virginia
40 Mississippi
41 Arkansas



Forrestal-Class Aircraft Carriers (CV)
60* Saratoga
62 Independence



Kitty Hawk-Class Aircraft Carriers (CV)
63 Kitty Hawk
64 Constellation
66 America



John F. Kennedy-Class Aircraft Carrier (CV)
67 John F. Kennedy



Enterprise-Class Aircraft Carrier (CVN)
65 Enterprise



Nimitz-Class Aircraft Carriers (CVN)
68 Nimitz
69 Dwight D. Eisenhower
70 Carl Vinson
71 Theodore Roosevelt
72 Abraham Lincoln
73 George Washington



Spruance-Class Destroyers (DD)
963 Spruance
964 Paul F. Foster
965 Kinkaid
966 Hewitt
967 Elliot

- 968 Arthur W. Radford
- 969 Peterson
- 970 Caron
- 971 David R. Ray
- 972 Oldendorf
- 973 John Young
- 974 Compt De Grasse
- 975 O'Brien
- 976 Merrill
- 977 Briscoe
- 978 Stump
- 979 Conolly
- 980 Moosbrugger
- 981 John Hancock
- 982 Nicholson
- 983 John Rodgers
- 984 Leftwich
- 985 Cushing
- 986 Harry W. Hill
- 987 O'Bannon
- 988 Thorn
- 989 Deyo
- 990 Ingersoll
- 991 Fife
- 992 Fletcher
- 997 Hayler



Charles F. Adams-Class Destroyers (DDG)

- 15 Berkeley
- 20 Goldsborough
- 24 Waddell

Farragut-Class Destroyers (DDG)

- 39 MacDonough
- 42 Mahan



Arleigh Burke-Class Destroyers (DDG)

- 51 Arleigh Burke
- 52 Barry
- 53 John Paul Jones



Kidd-Class Destroyers (DDG)

- 993 Kidd
- 994 Callaghan
- 995 Scott
- 996 Chandler



Knox-Class Frigate (FF)

- 1063 Reasoner
- 1064 Lockwood
- 1077 Quellet
- 1087 Kirk
- 1092 Thomas C. Hart

Knox-Class Training Frigate (FFT)

- 1078* Joseph Hewes
- 1079* Bowen
- 1084* McCandless
- 1085* Donald B. Beary
- 1089* Jesse L. Brown
- 1090* Ainsworth
- 1095* Truett
- 1097* Moinester



Wasp-Class Amphibious Assault Ships (LHD)

- 1 Wasp
- 2 Essex
- 3 Kearsarge
- 4 Boxer



Oliver Hazard Perry-Class Frigates (FFG)

- 7 Oliver Hazard Perry
- 8 McInerney
- 9 Wadsworth
- 10 Duncan
- 11 Clark
- 12 George Philip
- 13 Samuel E. Morison
- 14 Sides
- 15 Estocin
- 16 Clifton Sprague
- 19 John A. Moore
- 20 Antrim
- 21 Flatley
- 22 Fahriou
- 23 Lewis B. Puller
- 24 Jack Williams
- 25 Copeland
- 26 Gallery
- 27 Mahlon S. Tisdale
- 28 Boone
- 29 Stephen W. Groves
- 30 Reid
- 31 Stark
- 32 John L. Hall
- 33 Jarrett
- 34 Aubrey Fitch
- 36 Underwood
- 37 Crommelin
- 38 Curtis
- 39 Doyle
- 40 Halyburton
- 41 McCluskey
- 42 Klakring
- 43 Thach
- 45 DeWert
- 46 Rentz
- 47 Nicholas
- 48 Vandergrift
- 49 Robert G. Bradley
- 50 Taylor
- 51 Gary
- 52 Carr
- 53 Hawes
- 54 Ford
- 55 Elrod
- 56 Simpson
- 57 Reuben James
- 58 Samuel B. Roberts
- 59 Kauffman
- 60 Rodney M. Davis
- 61 Ingraham



Avenger-Class Mine Warfare Ships (MCM)

- 1 Avenger
- 2 Defender
- 3 Sentry
- 4 Champion
- 5 Guardian
- 6 Devastator
- 7 Patriot
- 8 Scout
- 9 Pioneer
- 10 Warrior
- 11 Gladiator



Newport-Class Tank Landing Ships (LST)

1181 Sumter
1183** Peoria
1184 Frederick
1186* Cayuga
1187** Tuscaloosa
1188** Saginaw
1189 San Bernardino
1190* Boulder
1192** Spartanburg County
1193** Fairfax County
1194 La Moure County
1196 Harlan County
1197 Barnstable County
1198** Bristol County



Aggressive-Class Mine Warfare Ships (MSO)

455* Implicit
488* Conquest
489* Gallant
492* Pledge



Iwo Jima-Class Amphibious Assault Ships (LPH)

7* Guadalcanal
9 Guam
10 Tripoli
11 New Orleans
12 Inchon

DDG 51



Charleston-Class Amphibious Cargo Ships (LKA)

114** Durham
115** Mobile
117** El Paso



Blue Ridge-Class Amphibious Command Ships (LCC)

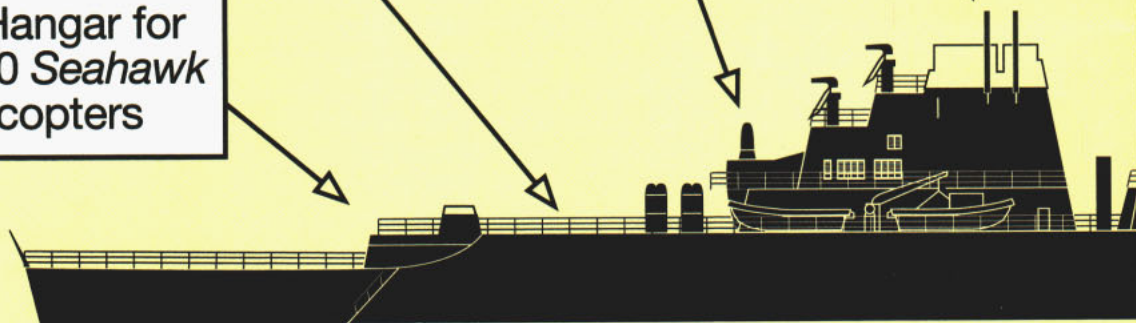
19 Blue Ridge
20 Mount Whitney

Power Plant
4 General Electric
LM-2500 Gas Turbines

20mm Cannon

64-cell Vertical
Launch System

Dual Hangar for
2 SH-60 Seahawk
Helicopters



Displacement: 8,300 tons

Length: 466 feet

Beam: 59 feet

Max Speed: 31 knots

Power: 2 Shafts
100,000 shaft
horsepower

Complement: 318 enlisted
21 officers



Whidbey Island-Class Dock Landing (LSD)

- 41 Whidbey Island
- 42 Germantown
- 43 Fort McHenry
- 44 Gunston Hall
- 45 Comstock
- 46 Tortuga
- 47 Rushmore
- 48 Ashland
- 49 Harpers Ferry



Anchorage-Class Amphibious Transport Docks (LSD)

- 36 Anchorage
- 37 Portland
- 38 Pensacola
- 39 Mount Vernon
- 40 Fort Fisher



Austin-Class Amphibious Transport Docks (LPD)

- 4 Austin
- 5 Ogden
- 6 Duluth
- 7 Cleveland
- 8 Dubuque
- 9 Denver
- 10 Juneau
- 12 Shreveport
- 13 Nashville
- 14 Trenton
- 15 Ponce

Flight IIA



Cyclone-Class Patrol Craft (PC)

- 1 Cyclone



Tarawa-Class Amphibious Assault Ships (LHA)

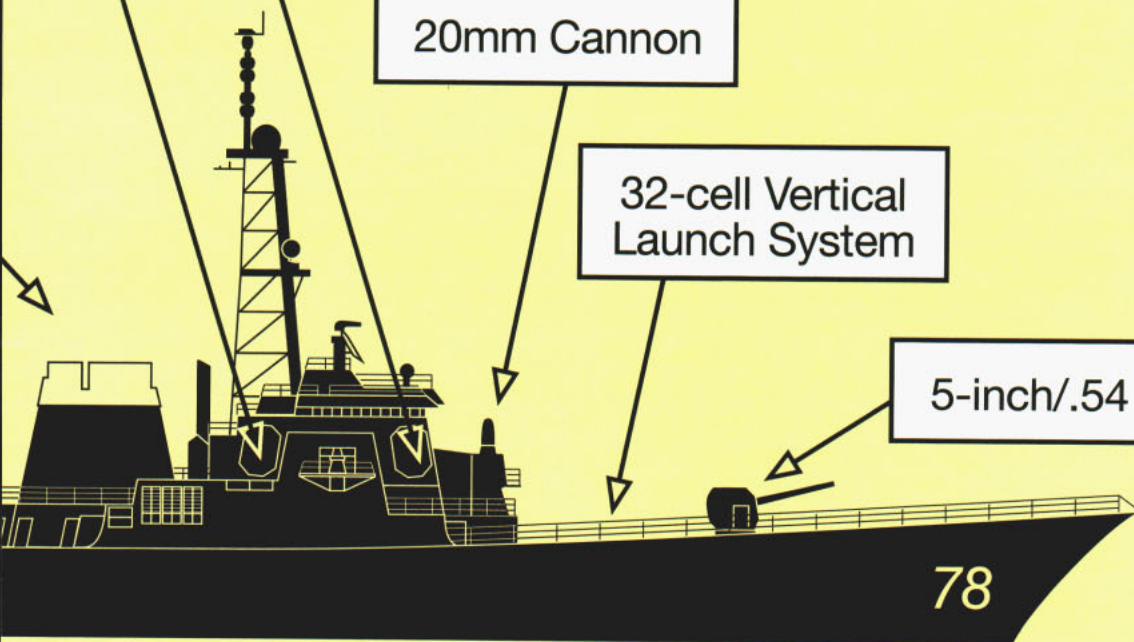
- 1 Tarawa
- 2 Saipan
- 3 Belleau Wood
- 4 Nassau
- 5 Peleliu

Spy 1D Phased
Array Radar

20mm Cannon

32-cell Vertical
Launch System

5-inch/.54 gun



Armament: *Standard Missile*
Tomahawk Missile
MK 46 Torpedoes
1 5-in./54 cal. MK-45 Gun
2 20mm *Phalanx*
Close-in Weapons Systems

Inside an attack sub

Attack subs, such as the Los Angeles-class Minneapolis/St. Paul, are designed as front-line defense against enemy ballistic subs, or boomers - large submarines loaded with long-range ballistic missiles. The smaller, faster-moving attack subs are equipped with sophisticated sonar and an arsenal suited to their main task: to seek out, hunt down and kill boomers. Attack subs, nicknamed hunter-killers, can also fire on surface ships and land-based targets. Stealth, or the ability to go undetected by enemy radar, is the attack sub's main protection.

EYES AND EARS

Communicating with - or from - a submerged sub is difficult because normal radio waves can't penetrate water. It's also risky, because many forms of communication can be detected by an enemy, which can reveal a sub's location. Here are some methods that help a sub stay hidden.

Sonar functions as a sub's ears. Mounted on the bow or trailed behind the sub, sonar can detect enemy subs and surface ships as well as mines laid on the ocean floor or under the ice. There are two types of sonar:

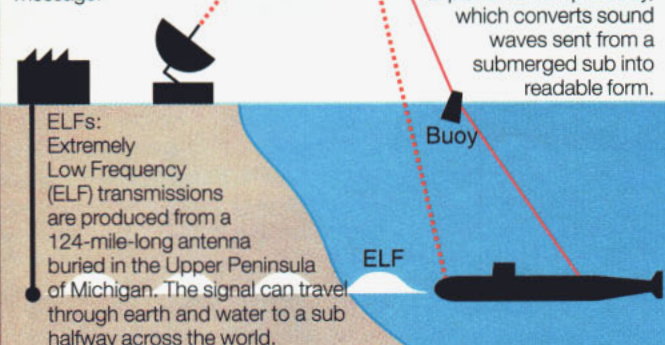
Active sonar sends out a pulse of sound and receives the returning echoes. The time it takes for an echo to return and the direction from which it came reveals the location of the object.



Passive sonar picks up sounds traveling through the water. Sonar operators, with the help of computers, compare the sound waves to determine their source and location.

Satellites: Satellites fixed in an orbit 23,000 miles above the Earth direct a laser beam to the area of the ocean where the sub is located. The laser pulses to transmit a message.

Communications buoys: The sub releases a buoy, which floats to the top of the water. The buoy can then send messages to or receive messages from a satellite orbiting overhead. Or, an airplane can drop a buoy, which converts sound waves sent from a submerged sub into readable form.



NERVE CENTER

The control room is the nerve center of the sub. It's where information from the navigation room, engine room, missile room and communications room all come together. From here, the commander and staff oversee the operations of the entire boat. Two planesman, or drivers, steer the boat using controls similar to an airplane's.

Retractable masts contain periscopes, sensors and antennas.

UPPER LEVEL
Navigation
communications
and command
center.

The crew fluctuates between 130 and about 15 officers, and is divided into three shifts.



BOTTOM LEVEL
Torpedo tubes, weapons
and machine shops

MIDDLE
Primary
quarters
crew
and
re
off du

TEETH AND CLAWS

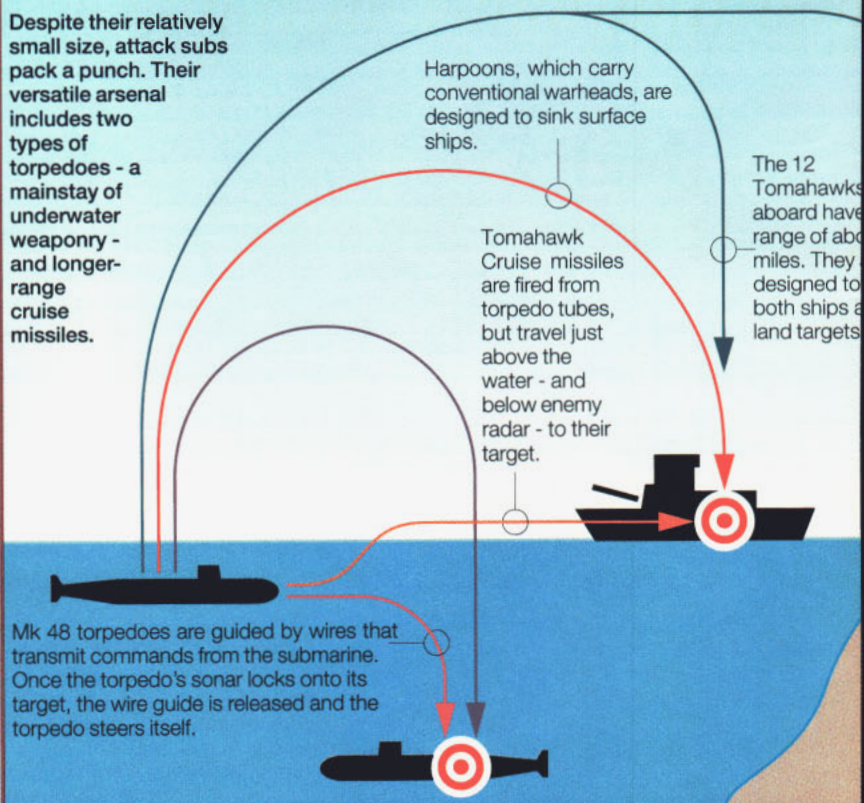
Despite their relatively small size, attack subs pack a punch. Their versatile arsenal includes two types of torpedoes - a mainstay of underwater weaponry - and longer-range cruise missiles.

Harpoons, which carry conventional warheads, are designed to sink surface ships.

Tomahawk Cruise missiles are fired from torpedo tubes, but travel just above the water - and below enemy radar - to their target.

The 12 Tomahawks aboard have a range of about 300 miles. They are designed to hit both ships and land targets.

Mk 48 torpedoes are guided by wires that transmit commands from the submarine. Once the torpedo's sonar locks onto its target, the wire guide is released and the torpedo steers itself.



POWERHOUSE

The nuclear sub's predecessor, the diesel-powered sub, has to surface regularly to refuel and release poisonous exhaust gasses. Going nuclear makes subs much more versatile because nuclear reactors produce no exhaust and need only a tiny amount of uranium fuel. Today, nuclear subs can stay submerged for months and commonly travel thousands of miles under the polar ice cap.

1 Heat is generated by radioactive uranium rods in the nuclear reactor.

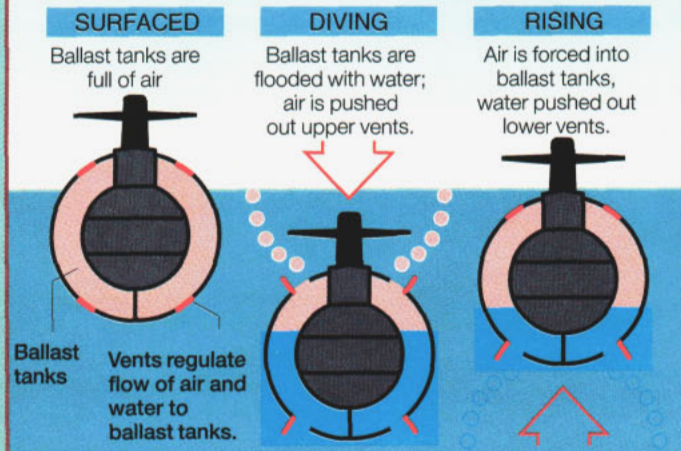
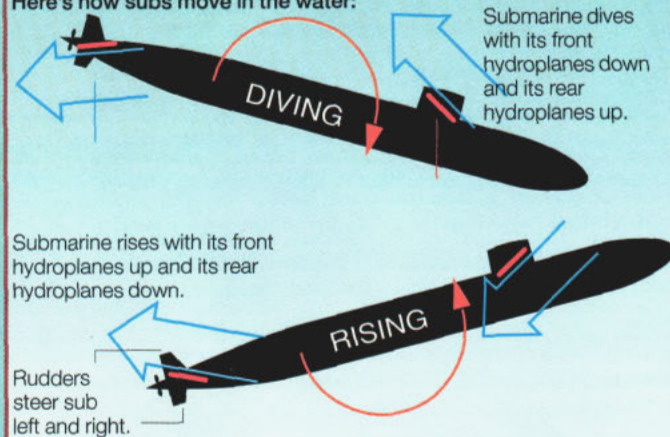
2 Water is super-heated by the reactor. The water is under pressure to keep it from boiling.

3 In a separate system, more water is heated to create steam. The steam is aimed at fan-like blades in the turbine engines. The steam spins the blades, turning a shaft connected to the sub's screw.

4 Electric generators provide electricity for the sub. When necessary, the sub can "run silent" by using an electric motor.

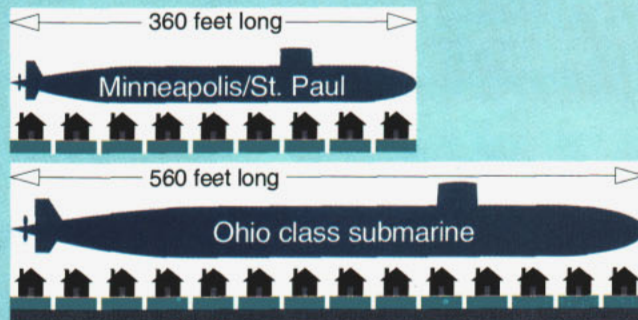
Navigation

Because it's often too risky for a sub to surface to determine its location, navigators use a method called "dead reckoning" or inertial navigation. Using their starting point, navigators can determine where they are by calculating the distance and direction they've traveled. Charts of the seabed and sonar are also used. Here's how subs move in the water:



How big?

The Minneapolis/St. Paul is as long as the front side of nine residential lots in a typical neighborhood. It is dwarfed by its big brother, the Ohio-class "boomer" ballistic missile submarines, which are as long as the front side of 14 residential lots in a typical neighborhood.



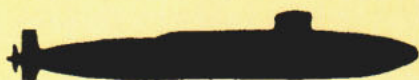
How fast?

The Minneapolis/St. Paul has a top speed of 20-plus knots, which is equal to 25-plus miles per hour, the typical speed limit on most city streets.

Courtesy of Minneapolis Star Tribune.
Graphic by Connie Nelson and Billy Steve Clayton.

U.S. Navy Submarines

Nuclear-Powered Ballistic Missile (SSBN)

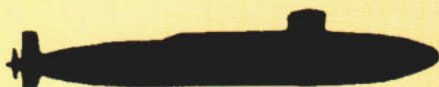


Lafayette-Class Submarine

- * 624 Woodrow Wilson

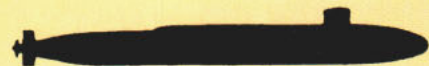
James Madison-Class Submarines

- * 629 Daniel Boone
- * 630 John C. Calhoun
- * 633 Casimir Pulaski
- 634 Stonewall Jackson



Benjamin Franklin-Class Submarines

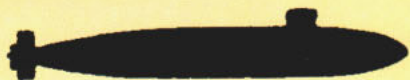
- 641 Simon Bolivar
- 658 Mariano G. Vallejo



Ohio-Class Submarines

- 726 Ohio
- 727 Michigan
- 728 Florida
- 729 Georgia
- 730 Henry M. Jackson
- 731 Alabama
- 732 Alaska
- 733 Nevada
- 734 Tennessee
- 735 Pennsylvania
- 736 West Virginia
- 737 Kentucky
- 738 Maryland
- 739 Nebraska

Nuclear-Powered Fast Attack (SSN)



Permit-Class Submarines

- * 614 Greenling
- 615 Gato



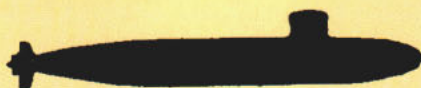
Benjamin Franklin-Class Submarines

- 642 Kamehameha
- 645 James K. Polk

* Boat is scheduled for decommissioning during 1994.

Narwhal-Class Submarine

- 671 Narwhal



Sturgeon-Class Submarines

- * 637 Sturgeon
- 638 Whale
- 639 Tautog
- 646 Grayling
- 647 Pogy
- * 648 Aspro
- 649 Sunfish
- * 650 Pargo
- 652 Puffer
- 660 Sand Lance
- * 662 Gurnard
- * 663 Hammerhead
- 666 Hawkbill
- 667 Bergall
- 668 Spadefish
- 669 Seahorse
- 670 Finback
- 672 Pintado
- 673 Flying Fish
- 674 Trepang
- 675 Bluefish
- 676 Billfish
- 677 Drum
- 678 Archerfish
- * 679 Silversides
- 680 William H. Bates
- 681 Batfish
- 682 Tunny
- 683 Parche
- 684 Cavalla
- 686 L. Mendel Rivers



Los Angeles-Class Submarines

- 688 Los Angeles
- 690 Philadelphia
- 691 Memphis
- 692 Omaha
- 693 Cincinnati
- 694 Groton
- 695 Birmingham
- 696 New York City
- 697 Indianapolis
- 698 Bremerton
- 699 Jacksonville
- 700 Dallas

- 701 La Jolla
- 702 Phoenix
- 703 Boston
- 704 Baltimore
- 705 City of Corpus Christi
- 706 Albuquerque
- 707 Portsmouth
- 708 Minneapolis-St. Paul
- 709 Hyman G. Rickover
- 710 Augusta
- 711 San Francisco
- 712 Atlanta
- 713 Houston
- 714 Norfolk
- 715 Buffalo
- 716 Salt Lake City
- 717 Olympia
- 718 Honolulu
- 719 Providence
- 720 Pittsburgh
- 721 Chicago
- 722 Key West
- 723 Oklahoma City
- 724 Louisville
- 725 Helena
- 750 Newport News
- 751 San Juan
- 752 Pasadena
- 753 Albany
- 754 Topeka
- 755 Miami
- 756 Scranton
- 757 Alexandria
- 758 Asheville
- 759 Jefferson City
- 760 Annapolis
- 761 Springfield
- 762 Columbus
- 763 Santa Fe
- 764 Boise
- 765 Montpelier
- 766 Charlotte
- 767 Hampton

Seawolf-Class Submarines

The Navy is constructing two Seawolf-class submarines: *Seawolf* (SSN 21) and *Connecticut* (SSN 22). A third *Seawolf*, a bridge between *Connecticut* and the start-up of a "new attack" submarine, was approved during the Bottom-up Review as the most cost-effective means of preserving the submarine industrial base. New attack sub construction is scheduled to start around FY1998.

Fleet Ballistic Missiles

Trident II (D-5)

Primary function: sub-surface to surface. Dimensions: length - 44 ft.; diameter - 83 in.; weight - 130,000 lbs. Range: more than 4,000 nautical miles. Payload: Thermonuclear MIRV (Multiple Independently Targetable Re-entry Vehicle); Maneuverable Re-entry Vehicle (MRV) warhead.

Trident I (C-4)

Primary function: sub-surface to surface. Dimensions: length - 34 ft.; diameter - 74 in.; weight - 73,000 lbs. Range: 4,000 nautical miles. Payload: Thermonuclear MIRV with maneuverable warhead.

Poseidon (C-3)

Primary function: sub-surface to surface. Dimensions: length - 34 ft.; diameter - 74 in.; weight - 65,000 lbs. Range: 2,500 nautical miles. Payload: Thermonuclear MIRV with maneuverable warhead.

Cruise Missiles

Tomahawk

Primary mission: long range, sub-sonic cruise missile conventionally-armed for anti-surface warfare; and conventionally- and nuclear-armed for land attack versions. Dimensions: length - 18 ft, 3 in. (with booster 20 ft., 6 in.); diameter - 20.4 in.; weight: 2,650 lbs. (3,200 lbs. with booster). Range: Land-attack, nuclear warhead - 1,350 nautical miles; land-attack conventional warhead - 600 nautical miles; anti-ship configuration, more than 250 nautical miles. Payload: Conventional - 1,000 lbs. *Bullpup*; Nuclear - W-80 conventional submunitions dispenser with combined effect bombs.

Harpoon

Primary function: destroys hostile targets such as combatants, submarines or other shipping. Dimensions: length - 15 ft., surface/submarine launched; 12 ft., 7 in. air launched; diameter - missile body, 1 ft., 2 in. Payload: 500 lbs. high explosive, blast penetrator.

Surface-to-Air Missiles

Standard Missile Family

Primary mission: engage and intercept aircraft, anti-ship missiles and surface ships.

SM-1 MR, SM-2 MR Dimensions: length - 14 ft., 7 in.; diameter - 13.5 in.; weight - SM-1, 1,100 lbs.; SM-2, 1,380 lbs. Payload: Proximity fuse, high explosive.

SM-2 ER Dimensions: length - 26.2 ft.; diameter - 13.5 in.; weight - 2,980 lbs. Payload: proximity fuse, high explosive.

Air-to-Air Missiles

Sparrow Missile

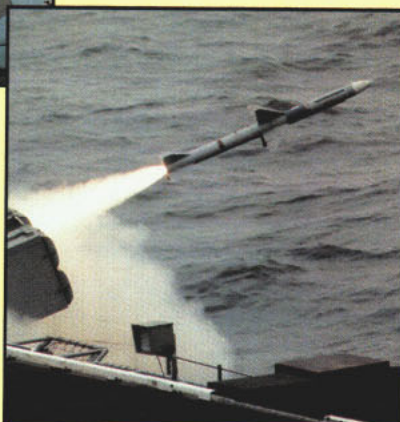
Primary mission: To provide Navy fighter aircraft with air superiority in a hostile environment. Dimensions: length - 12 ft.; diameter - 8 in.; weight - 510 lbs. Range: More than 30 nautical miles. Payload: Blast fragment, high explosive.

Phoenix Missile

Primary mission: Destroys multiple hostile air targets with conventional warheads at great range in an all-weather environment. Dimensions: Length - 13 ft.; diameter - 15 in.; weight - 1,024 lbs. Range: More than 104 nautical miles. Payload: Proximity fuse, high-explosive; weight - 135 lbs.

Sidewinder Missile

Primary mission: Air-to-air missile, short-range, dogfight missile used against hostile aircraft. Dimensions: length - 9 ft., 5 in.; diameter - 5 in.; weight - 195 lbs. Range: More than 3.5 nautical miles. Payload: Annular blast fragmentation; weight - 25 lbs.



AMRAAM Missile

Primary mission: The AIM-120A, is the next generation of all-weather, radar-guided, beyond visual range missile designed to provide launch and leave capability and multiple target engagement capability. Dimensions: length - 12 ft.; diameter - 7 in.; weight - 335 lbs. Range: More than 35 nautical miles. Payload: Blast high explosive.

Air-to-Ground Missiles

HARM Missile

Primary mission: Air-to-surface missile designed to destroy or suppress enemy electronic emitters especially those directing anti-aircraft guns and surface-to-air missiles. Dimensions: length - 13 ft., 18 in.; diameter - 10 in.; weight - 807 lbs. Range: more than 50 nautical miles. Payload: Blast fragments.

Tacit Rainbow Missile

Primary function: *Tacit Rainbow* provides air defense suppression capability to counter hostile integrated air defense systems when used with *HARM* and other systems. Dimensions: length - 8 ft., 4 in.; diameter - 19 in.; wing span - 5 ft., 5 in.; weight - 430 lbs.; warhead weight - 38 lbs. Range: more than 90 nautical miles.

IR Maverick Missile

Primary function: air-to-surface missile designed for day/night sea warfare and land interdiction. Dimensions: length - 8 ft. 2 in.; diameter - 12 in.; wing span - 2 ft., 4.5 in.; weight - 3675 lbs. Range: 6 to 12 nautical miles. Payload: penetrating/blast warhead.

Torpedoes

MK 48 and MK 48 Advanced Capability (AdCap) Torpedo

Primary function: sub-surface to sub-surface and sub-surface to surface. Dimensions: length - 19 ft.; diameter - 21 in.; weight - 3,434 lbs., (MK 48 AdCap - 3,695 lbs.). Range: more than 5 miles; depth - more than 1,200 ft. Guidance: active and/or passive homing. Payload: 650 lbs. high-explosive warhead.

MK 46 Torpedo

Primary function: launched from surface combatant torpedo tubes, ASROC missile and fixed and rotary wing aircraft. Dimensions: length - 8.5 ft.; diameter - 12.75 in.; weight - 517.6 lbs. Guidance: active or passive/active homing. Payload: 98 lbs. of PBXN-103 high explosive.

MK 50 Torpedo

Primary function: air to sub-surface, surface to sub-surface. Dimensions: length - 9.3 ft.; diameter - 12.75 in.; weight - 750 lbs. Guidance: active/passive homing.

Naval Guns

MK 15 Phalanx Close-in Weapons System (CIWS)

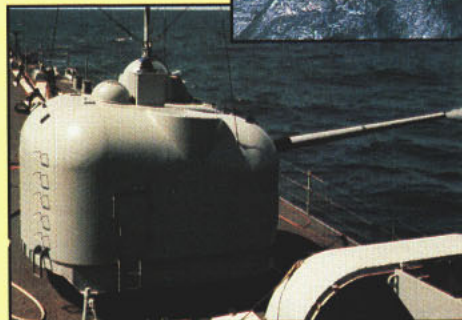
Primary function: provides U.S. Navy ships with a defense against anti-ship missiles. Dimensions: weight - 12,500 lbs.; magazine capacity - 989.

5-inch/.54 Caliber Lightweight Gun

Primary function: Provides surface combatants accurate naval gunfire against fast, highly maneuverable surface targets, air threats and shore targets. Fires at a rate of 16 to 20 rounds per minute.

MK 75, 76mm/.62 Caliber Gun System

Primary function: provides frigates and other combatants with a fast-reaction, lightweight gun to counter aircraft, cruise missiles and surface ships. Features: an enclosed naval gun mount, single barrel, remote-controlled, rapid-fire capability.





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ENLISTED SEABEE COMBAT WARFARE



AIRCREW



SMALL CRAFT (ENLISTED)



OFFICER SEABEE COMBAT WARFARE



SMALL CRAFT (OFFICER)



NAVAL FLIGHT SURGEON



SSBN DETERRENT PATROL



NAVAL FLIGHT OFFICER



MASTER DIVER



CRAFTMASTER



DIVING OFFICER



COMMAND AT SEA



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